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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

In re SOCIAL MEDIA ADOLESCENT) MDL No. 4:22-md-03047-YGR
ADDICTION/PERSONAL INJURY)
PRODUCTS LIABILITY LITIGATION)

This Document Relates To:

BROWARD COUNTY SCHOOL BOARD,
Plaintiff,

vs.

META PLATFORMS, INC., et al.,
Defendants.

Case No. 4:23-cv-01061-YGR

DEMAND FOR JURY TRIAL

AMENDED COMPLAINT FOR VIOLATIONS OF: (1) FLORIDA PUBLIC NUISANCE
LAW; (2) FLORIDA DECEPTIVE AND UNFAIR TRADE PRACTICES; (3) NEGLIGENCE;
AND (4) GROSS NEGLIGENCE

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1 **I. INTRODUCTION**

2 1. American adolescence is undergoing a dramatic change. Today, a staggering
3 number of our nation's children suffer from mental and behavioral health disorders. In 2019, 13%
4 of adolescents reported having a major depressive episode, a 60% increase from 2007. The
5 quantum change in such cases has been fueled in part by a profound technological transformation
6 deliberately designed by some of the country's most profitable social media giants in ways that
7 exploit for profit the vulnerabilities of children's brain development.¹

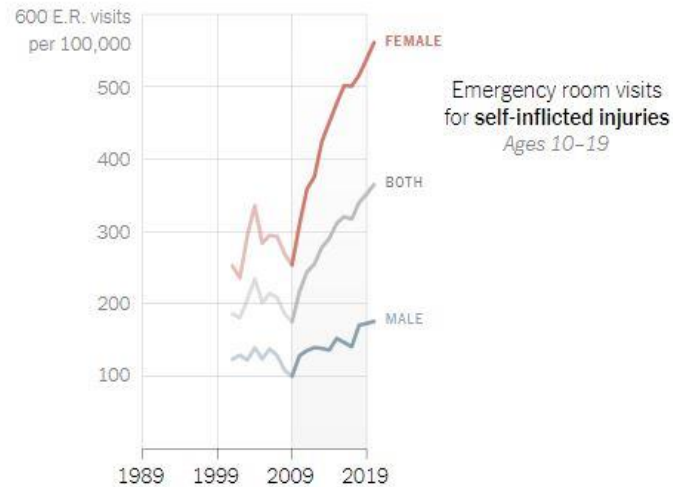
8 2. Three decades ago, the gravest public health threats to teenagers in the United
9 States came from binge drinking, drunk driving, teen pregnancy, and smoking. With increased
10 education, these have since fallen significantly but have been replaced by a new public health
11 concern: soaring rates of mental health disorders, including depression, self-harm, and suicidal
12 ideation.² Twenty percent of American children have a mental, emotional, developmental, or
13 behavioral disorder. The rising rates of emergency room visits for suicide and self-harm leave
14 little doubt that the physical nature of the threat has changed dramatically in the last 15 years:³

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23 ¹ Social media can be defined as any form of interactive electronic communication through an
24 internet website or application by which a user creates a service-specific identifying user profile
25 to connect with other users of the internet website or application for the purpose of communicating
and sharing information, ideas, news, stories, opinions, images, and other content.

26 ² Matt Richtel, *'It's Life or Death': The Mental Health Crisis Among U.S. Teens*, N.Y. Times
(May 3, 2022), <https://www.nytimes.com/2022/04/23/health/mental-health-crisis-teens.html>.

27 ³ *Id.*

Emergency room visits for self-harm by children and adolescents rose sharply over the last decade, particularly among young women.



By The New York Times | Source: Centers for Disease Control and Prevention

4

3. For people aged 10 to 24, suicide rates, stable from 2000 to 2007, leapt nearly 60% by 2018 according to the Centers for Disease Control and Prevention (“CDC”).⁵ On December 7, 2021, the United States Surgeon General issued an advisory on the youth mental health crisis: “‘Mental health challenges in children, adolescents, and young adults are real and widespread. Even before the pandemic, an alarming number of young people struggled with feelings of helplessness, depression, and thoughts of suicide – and rates have increased over the past decade.’”

4. Youth mental health problems have advanced in lockstep with the growth of social media platforms deliberately designed to attract and addict youth by amplifying harmful material, dosing users with dopamine hits, and thereby driving youth engagement and advertising revenue. Defendants Facebook, Instagram, Snap, TikTok, and YouTube (all defined below) design, market, promote, and operate social media platforms for which they have especially cultivated a young audience. They have successfully grown their platforms exponentially over the past decade, from millions to billions of users, particularly children and teens. According to an August 30, 2022

⁴ Matt Richtel, *‘It’s Life or Death’: The Mental Health Crisis Among U.S. Teens*, N.Y. Times (Apr. 23, 2022), <https://www.nytimes.com/2022/04/23/health/mental-health-crisis-teens.html>.

⁵ *Id.*

1 World Economic Forum publication, a Pew Research Center Study found that almost half of
 2 United States teenagers aged 13 to 17 say they are online “almost constantly.”⁶

3 5. There is a reason America’s youth is online “almost constantly,” which is that the
 4 primary metric of success for these social media giants is engagement. The companies’ success
 5 requires more users to be on their platforms for longer periods of time in order to maximize
 6 advertising revenue. Defendants deliberately employ strategies designed to maximize
 7 engagement, including: (a) using algorithms and endless scrolls that create harmful experiences
 8 for children and teens; and (b) using Intermittent Variable Rewards (“IVRs”) or dopamine hits to
 9 intentionally alter users’ behavior, creating habits and addiction.

10 6. The algorithms driving the platforms are designed to exploit the human brain’s
 11 attraction to divisiveness by amplifying the most polarizing, titillating, controversial, emotionally
 12 charged, sexual, violent and otherwise salacious material created by third parties and by defendants
 13 themselves. Distortions and divisiveness are not only tolerated but embraced.⁷ Each passing
 14 YouTube video begets another, more extreme video in a continuous feed, transporting one from
 15 the sexual to the pornographic, from the political to the radical. The longer a user is on, the more
 16 extreme the material required to keep that user on. It can, and often does, create an alternate reality
 17 defined by conspiracy and rage. The content promoted, often unhealthy or outright harmful for
 18 our children and teens, is deliberately engineered to exploit the frailties of their developing brains,
 19 maximize their engagement, and drive ad revenue.

20 7. Such algorithms have allowed defendants to grow not only their user bases but the
 21 frequency and time spent by users. In 2018, Facebook researchers warned of the dangers of
 22 systems designed to deliver users more and more divisive content to increase their time on the
 23

24 ⁶ Stefan Ellerbeck, *Half of U.S. teens use the internet ‘almost constantly.’ But where are they*
 25 *spending their time online?*, World Economic Forum (Aug. 30, 2022),
 26 [https://www.weforum.org/agenda/2022/08/social-media-internet-online-teenagers-screens-](https://www.weforum.org/agenda/2022/08/social-media-internet-online-teenagers-screens-us/#:~:text=The%20number%20of%20teens%20using,from%202014%2D15%20to%202022.)
[us/#:~:text=The%20number%20of%20teens%20using,from%202014%2D15%20to%202022.](https://www.weforum.org/agenda/2022/08/social-media-internet-online-teenagers-screens-us/#:~:text=The%20number%20of%20teens%20using,from%202014%2D15%20to%202022.)

27 ⁷ Max Fisher, *The Chaos Machine: The Inside Story of How Social Media Rewired Our Minds*
 28 *and Our World* at 22-23 (2022) (“Chaos Machine”).

platform.⁸ A flicker of anger is amplified to wildfire because people pay attention to fire. Extreme and/or sensationalistic views, even if held by a small group, are algorithmically promoted, amplified, and perceived by users to be more popular and accurate than they are because controversy and confusion keep people paying attention for longer periods of time. Attention equals engagement, and engagement equals advertising revenue. Defendants' growth is a product of choices they made to design and operate their platforms in ways that exploit the psychology and neurophysiology of their users, particularly children and teens, into spending more and more time on their platforms.

8. Defendants also exploit the weakness of developing minds with continuous dopamine hits, akin to that experienced in a casino, with what is known as the "social-validation feedback loop." As former Napster founder and Facebook president Sean Parker ("Parker") explained:

"The thought process that went into building these applications . . . was all about, 'How do we consume as much of your time and conscious attention as possible?'" To do that, he said, "We need to sort of give you a little dopamine hit every once in a while, because someone liked or commented on a photo or a post or whatever. And that's going to get you to contribute more content, and that's going to get you more likes and comments."⁹

9. These manipulations were deliberately built into the algorithms from the beginning, as further noted by Parker:

I mean, it's exactly the kind of thing that a hacker like myself would come up with because you're exploiting a vulnerability in human psychology. [chuckles] And I . . . I think that we . . . you know, the inventors, creators, and it's me, it's Mark, it's Kevin Systrom at Instagram. It's all of these people [who] understood this consciously, and we did it anyway.¹⁰

⁸ Jeff Horwitz & Deepa Seetharaman, *Facebook Executives Shut Down Efforts to Make the Site Less Divisive*, Wall St. J. (May 26, 2020), <https://www.wsj.com/articles/facebook-knows-it-encourages-division-top-executives-nixed-solutions-11590507499>.

⁹ *Chaos Machine* at 25.

¹⁰ *The Social Dilemma – 2020 Transcript*, Scraps from the Loft (Oct. 3, 2020), <https://scrapsfromtheloft.com/movies/the-social-dilemma-movie-transcript/>.

10. The algorithms, which promote and amplify harmful content created by third parties and defendants themselves in ways designed to be addictive, are especially effective and harmful to defendants' youth audience, who are more vulnerable because their brains are still developing. Adolescents have a stronger drive to socialize than adults, which manifests as heavier use of social networks and a greater sensitivity to what happens there. Social apps hijack a tween and teen compulsion – to connect – that can be even more powerful than hunger or greed.¹¹ As noted by Stanford addiction specialist Dr. Anna Lembke:

What makes adolescents especially vulnerable to the addictive nature of smartphones is that they are in a crucially pliable point of their mental and physical growth. "They're incredibly socially sensitive"

* * *

"[They] are more vulnerable to risk taking, so the emotion centers of the brain drive behavior more than the future planning centers of the brain" . . . which is why teens are impulsive enough to take risks without recognizing future consequences. Their brains are pliable because adolescence is a time when neurons undergo pruning, fundamentally altering the shape and structure of the brain from one of a child's into that of an adult's.

Online, that can be dangerous: It can lead to slut shaming when kids send and receive nude photos without thinking about ramifications, for example, or bullying on anonymous messaging apps Being turned on by peers can be devastating for a teen and in some extreme, tragic cases lead to suicide.¹²

11. The need to fit in and the desire to be popular and gain social points mean that children this age are especially vulnerable to falling for the "social media contagion effect," the term Dr. Lembke uses to describe a child doing something just because a peer is doing it.¹³ That reasoning is simply logical in an adolescent's brain. Yet there is almost no limit to the hate pouring in online and no limit on who could be targeted, or how viciously, on social media:

The Silicon Valley dream of freedom from laws and hierarchies has become, online, freedom from social and moral codes as well. The community has created

¹¹ *Id.*

¹² Tanya Basu, *Just How Bad is Kids' Smartphone Addiction?*, The Daily Beast (Jan. 9, 2018), <https://www.thedailybeast.com/just-how-bad-is-kids-smartphone-addiction>.

¹³ *Id.*

1 its own standards . . . but around the organizing profit-driving incentive of all social
2 media: attention – at significant cost to the mental health of America’s youth.¹⁴

3 12. Increasingly, experts who study the effects of social media on teenagers report on
4 the dangers, including: (a) social comparison (when everyone else’s life or body looks better
5 online); (b) displacement (social media replacing sleep, exercise, and real interaction); (c)
6 algorithms that prod children toward unhealthy content about eating disorders and the like; and
7 (d) pornography reaching children on social media at younger ages. These impacts
8 disproportionately affect girls. Jean Twenge (“Twenge”), a psychology professor at San Diego
9 State University and a leading expert on the subject, states: “‘There is a substantial link to
10 depression, and that link tends to be stronger among girls’” and “[t]he same is true for self-harm.
11 . . . ‘The more hours a day she spends using social media, the more likely she is to engage in self-
12 harm behaviors – the link is there for boys as well, it’s just not as large.’”¹⁵ Twenge further reports:
13 “‘Most of the large studies show that heavy users of social media are about twice as likely to be
14 depressed as light users.’”¹⁶ Similarly, young boys are “especially susceptible” to extremism and
15 radicalization online because, as reported by Cynthia Miller-Idris, the Director of Online Research
16 at American University’s Polarization and Extremism Innovation Lab in addressing on-line-mass-
17 shooter-radicalization, “[they spend] more time online and more circulation of conspiracy theories
18 and hateful content created a kind of tinderbox . . . So, kids are being affected by this whether they
19 are . . . being drawn into hateful content as a perpetrator or [being] victimized.”¹⁷

20 13. Federal research shows that teenagers as a group are getting less sleep and exercise
21 and spending less in-person time with friends – all crucial for healthy development – at a period

22
23 ¹⁴ *The Chaos Machine* at 55.

24 ¹⁵ Jennifer A. Kingson, *Social media’s effects on teen mental health comes into focus*, Axios (Jan.
25 11, 2023), <https://www.axios.com/2023/01/11/social-media-children-teenagers-mental-health-tiktok-meta-facebook-snapchat>.

26 ¹⁶ *Id.*

27 ¹⁷ *Examining the warning signs of online extremism targeting young people*, YouTube,
28 <https://www.youtube.com/watch?v=AA4LqDeYQAQ>.

1 in life when it is typical to test boundaries and explore one's identity. The combined result for
 2 some adolescents is a kind of cognitive implosion: anxiety, depression, compulsive behaviors, self-
 3 harm, vandalism, violence, and even suicide.

4 14. Broward County Public Schools have borne painful witness to all of this, firsthand,
 5 to devastating effect. On February 14, 2018, a teen opened fire at a high school killing 17 people
 6 after increasingly disturbing searches and posts on social media.¹⁸ "For months leading up to the
 7 Parkland massacre, [the teenage shooter] searched the internet for information and videos about
 8 mass shootings, leaving behind YouTube comments expressing his desire to 'kill people.'"¹⁹ In
 9 September 2021, a Florida teen was arrested in connection with a viral trend dubbed "devious
 10 licks," in which children filmed themselves destroying and stealing school property in order to
 11 later share the footage on the popular video-sharing app, TikTok.²⁰ In December 2021, another
 12 TikTok video threatened violence in Broward schools, creating the need for increased police
 13 presence in all Broward schools.²¹ This followed arrests of several students, including a Parkland
 14 teen, who posted a mass shooting threat to his school in a social media chatroom.²² As noted at
 15 the time by Dr. Vickie Cartwright, Broward County's superintendent of schools:

16 "America's education system is under attack right now, we are under attack
 17 by a social media platform that will not intervene when it is necessary; just as you

18
 19 ¹⁸ *Florida school shooting suspect made 'disturbing' social media posts*, Fox 11 Los Angeles
 20 (Feb. 15, 2018), <https://www.foxla.com/news/florida-school-shooting-suspect-made-disturbing-social-media-posts>.

21 ¹⁹ Dakin Andone & Kevin Conlon, *Parkland gunman spent weeks making violent social media*
 22 *posts and searching online for information about mass shootings, testimony shows*, CNN (July 28,
 2022), *Parkland gunman spent weeks making violent social media posts and searching online for*
information about mass shootings, testimony shows.

23 ²⁰ Nicole Pelletiere, *15-year-old student's arrest linked to banned TikTok challenge after police*
 24 *locate video of crime*, Fox News (Sept. 17, 2021), <https://www.foxnews.com/lifestyle/florida-teen-arrested-tiktok-school-devious-licks>.

25 ²¹ Devoun Cetoute, *Seeing more police in South Florida schools? A TikTok threat has officers*
 26 *on high alert*, Miami Herald (Dec. 17, 2021), <https://www.miamiherald.com/news/local/education/article256670512.html>.

27 ²² *Id.*

1 cannot go inside an airport and say the word bomb, it should not be allowed on a
2 social media platform for individuals to make threats toward schools”

3 * * *

4 “I’m talking about TikTok . . . we need help I cannot fathom that any
5 other country would allow this type of attack to be occurring on their education
6 system.”²³

7 15. Alberto Carvalho (“Carvalho”), former superintendent of Miami-Dade County
8 Public Schools,²⁴ was on the same page addressing impacts on Florida’s youth: “It is absolutely
9 baffling to me that this can continue to occur, it is also clear that these threats are hoaxes,” said
10 Carvalho, pointing out some of the costs of the social media threats. “We have to take every one
11 of them seriously, and the drain on our resources, the disruption to teaching and learning, the fear
12 that it causes across the community is just unacceptable.”²⁵

13 16. Broward Teachers Union President Anna Fusco (“Fusco”) said the near-constant
14 threats are also a near-constant topic of conversation among teachers. “It’s really really truly
15 affecting the social-emotional, mental health of our students and all of our employees of Broward
16 County Public Schools because we just really don’t know if it’s going to be played out and that is
17 real,” Fusco said.²⁶

18 17. Like virtually all schools in the United States now, Broward County schools are
19 forced to address a high degree of distraction, depression, suicidality, and other mental disorders
20 suffered by children, caused or worsened by the overconsumption of social media on a daily basis,
21 which substantially interferes with the District’s paramount mission to educate Broward County
22 students. Indeed, Broward County Public Schools have been forced to include in their core mission

23 ²³ Ari Odzer, *Miami-Dade, Broward School Officials Call for Federal Action Against Social
24 Media Threats*, CNBC - 6 S. Fla (Dec. 17, 2021), <https://www.nbcmiami.com/news/local/miami-dade-broward-school-officials-call-for-federal-action-against-social-media-threats/2644305/>.

25 ²⁴ Carvalho is currently superintendent of the Los Angeles Unified School District.

26 ²⁵ Ari Odzer, *Miami-Dade, Broward School Officials Call for Federal Action Against Social
27 Media Threats*, CNBC - 6 S. Fla (Dec. 17, 2021), <https://www.nbcmiami.com/news/local/miami-dade-broward-school-officials-call-for-federal-action-against-social-media-threats/2644305/>.

28 ²⁶ *Id.*

1 the interim guardrail of providing 95% of staff with youth mental health training by 2025.²⁷ The
 2 need is that great.

3 18. This complaint does not seek to disparage, discipline or discourage technology. By
 4 all accounts, social media can be an amazing tool for learning and growth for entrepreneurship and
 5 showcasing one's skills. However, these platforms increasingly define the world around our
 6 youth, creating social realities and interactions. Safe and healthy social media use by children and
 7 teens lies in stark contrast with the deliberate design of algorithms to: (a) flood children and teens
 8 with as much divisive and harmful content as possible, for as long as possible; and (b) ultimately
 9 addict them, all for the sake of profit. This is having deep and dangerous ramifications on our
 10 youth, our communities, and our schools that simply cannot be ignored. These social media giants
 11 can and should take measures to stem the tide of the mental health crisis afflicting America's social
 12 media-addicted youth.

13 **II. JURISDICTION AND VENUE**

14 19. This Court has subject matter jurisdiction over this case under 28 U.S.C. §1332(a)
 15 because the amount in controversy exceeds \$75,000 and because plaintiff and defendants are
 16 residents and citizens of different states.

17 20. This is a judicial district where defendants are subject to personal jurisdiction in
 18 accordance with 28 U.S.C. §1391 and California Code of Civil Procedure §410.10, the California
 19 long-arm statute. Defendants purposefully availed themselves of the benefits, profits, and
 20 privileges deriving from their business activities in this state. Defendants Facebook and Instagram
 21 (defined below) maintain their principal places of business in Menlo Park, California. Defendants
 22 ByteDance Inc., Alphabet Inc., and Google LLC maintain their principal places of business in
 23 Mountain View, California. Defendants YouTube, LLC maintains its principal place of business
 24 in San Bruno, California.

25
 26
 27 ²⁷ *Strategic Plan - Goals and Guardrails, Students First - 2027 Student Outcomes Focused*
 28 *Strategic Plan*, Broward Cnty. Pub. Schs., <https://www.browardschools.com/strategicplan> (last visited Feb. 27, 2023).

21. The non-resident defendants regularly engage in business within the State of California and within this District. Defendants have committed tortious acts that have caused injury to plaintiff. Defendants expect, or should reasonably have expected, those acts to have consequences in the State of California. Moreover, defendants solicited business within this District, engaged in persistent courses of conduct here, and derived substantial revenue from goods used and services rendered in the State of California and this District through interstate commerce.

22. Defendants are regularly engaged in the business of designing, operating, and marketing social network platforms, either directly or indirectly through third-party related entities, in the State of California.

23. Venue is proper within this District and this Division pursuant to 28 U.S.C. §1391 and Civil L.R. 3-2(c) because a substantial part of the events or omissions giving rise to the claims at issue in this Complaint arose in this District, and defendants are subject to the Court's personal jurisdiction with respect to this action.

III. THE PARTIES

A. Plaintiff

24. The School Board of Broward County, Florida is entrusted with governing a school Broward County Public Schools, a district located in Broward County, Florida. It is the second largest school district in the State of Florida and the sixth largest in the United States. During the 2021-2022 school year, Broward County schools served 256,037 students enrolled in 332 schools and education centers district wide. Plaintiff's offices are located at 600 SE Third Avenue, Fort Lauderdale, Florida.

B. Defendants

1. Meta, Facebook, and Instagram Entities

25. Defendant Meta Platforms, Inc. ("Meta"), formerly known as Facebook, Inc., is a Delaware corporation with its principal place of business in Menlo Park, California. Defendant Meta builds and maintains technologies for social media platforms, communication platforms, and electronic devices that are widely available to users throughout the United States. The platforms developed and maintained by Meta include Facebook (including its self-titled application,

1 Marketplace, and Workplace), Messenger (including Messenger Kids), Instagram, and a line of
 2 electronic virtual reality devices and services called Meta Quest (formerly Oculus) (collectively,
 3 “Meta platforms”).

4 26. Defendant Meta’s subsidiaries include defendants Facebook Holdings, Facebook
 5 Operations, Meta Payments, Facebook Technologies, Siculus (all defined below, and collectively,
 6 with Meta, “Facebook”), and Instagram.

7 27. Defendant Meta’s platforms, Facebook and Instagram, are among the most popular
 8 social networking platforms in the world, with more than 3.6 billion users worldwide.²⁸

9 28. In addition to Meta maintaining its principal place of business within this District,
 10 Meta transacts or has transacted business in this District and throughout the United States. At all
 11 times material to this Complaint, acting alone or in concert with its subsidiaries, Meta has
 12 advertised, marketed, and distributed the Meta platforms to consumers throughout the United
 13 States. At all times material to this Complaint, Meta formulated, directed, controlled, had the
 14 authority to control, or participated in the acts and practices set forth in this Complaint.

15 29. Defendant Meta’s subsidiary, defendant Facebook Holdings, LLC (“Facebook
 16 Holdings”), was organized under the laws of the State of Delaware on March 11, 2020 and is a
 17 wholly-owned subsidiary of Meta. Facebook Holdings is primarily a holding company for entities
 18 involved in Meta’s supporting and international endeavors, and its principal place of business is in
 19 Menlo Park, California. Defendant Meta is the sole member of Facebook Holdings.

20 30. Defendant Meta’s subsidiary, defendant Facebook Operations, LLC (“Facebook
 21 Operations”), was organized under the laws of the State of Delaware on January 8, 2012 and is
 22 wholly owned by Meta. The principal place of business of Facebook Operations is in Menlo Park,
 23 California. Defendant Meta is the sole member of Facebook Operations.

24 31. Defendant Meta’s subsidiary, defendant Meta Payments Inc. (“Meta Payments”),
 25 was incorporated in the State of Florida on December 10, 2010 as Facebook Payments Inc. In
 26

27 ²⁸ Felix Richter, *Meta Reaches 3.6 billion People Each Month*, Statista (Oct. 29, 2021),
 28 <https://www.statista.com/chart/2183/facebook-mobile-users/>.

1 July 2022, the entity's name was amended to Meta Payments Inc. Meta Payments is a wholly-
2 owned subsidiary of Meta. Meta Payments manages, secures, and processes payments made
3 through Meta, among other activities, and its principal place of business is in Menlo Park,
4 California.

5 32. Defendant Meta's subsidiary, defendant Facebook Technologies, LLC ("Facebook
6 Technologies"), was organized under the laws of the State of Delaware as "Oculus VR, LLC" on
7 March 21, 2014 and acquired by Meta on March 25, 2014. Facebook Technologies develops
8 Meta's virtual and augmented reality technology, such as the Meta Quest line of services, among
9 other technologies related to Meta's platforms, and its principal place of business is in Menlo Park,
10 California. Defendant Meta is the sole member of Facebook Technologies.

11 33. Defendant Meta's subsidiary, defendant Instagram, LLC ("Instagram"), was
12 founded by Kevin Systrom and Mike Krieger in October 2010 and is a social media platform
13 designed for photo and video sharing. In April 2012, Meta purchased the company for
14 approximately \$1 billion. Meta reformed the limited liability company under the laws of the State
15 of Delaware on April 7, 2012, and its principal place of business is in Menlo Park, California.
16 Defendant Meta is the sole member of Instagram.

17 34. Defendant Meta's subsidiary, defendant Siculus, Inc. ("Siculus"), was incorporated
18 in the State of Delaware on October 19, 2011. Siculus is a wholly-owned subsidiary of Meta that
19 supports Meta platforms by constructing data facilities and other projects. Siculus' principal place
20 of business is in Menlo Park, California.

21 **2. Alphabet, Google, and YouTube Entities**

22 35. Defendant Alphabet Inc. ("Alphabet") is a Delaware corporation with its principal
23 place of business in Mountain View, California. Alphabet is the sole stockholder of
24 XXVI Holdings (defined below).

25 36. Defendant XXVI Holdings Inc. ("XXVI Holdings"), is a Delaware corporation
26 with its principal place of business in Mountain View, California. XXVI Holdings is a wholly-
27 owned subsidiary of Alphabet and the managing member of Google (defined below).

1 37. Defendant Google LLC (“Google”) is a limited liability company organized under
2 the laws of the State of Delaware, and its principal place of business is in Mountain View,
3 California. Google is a wholly-owned subsidiary of XXVI Holdings and the managing member
4 of YouTube, LLC. Google transacts or has transacted business in this District and throughout the
5 United States. At all times material to this Complaint, acting alone or in concert with others,
6 Google has advertised, marketed, and distributed its YouTube video sharing platform to consumers
7 throughout the United States. At all times material to this Complaint, acting alone or in concert
8 with YouTube, LLC, Google formulated, directed, controlled, had the authority to control, or
9 participated in the acts and practices set forth in this Complaint.

10 38. Defendant YouTube, LLC is a limited liability company organized under the laws
11 of the State of Delaware, and its principal place of business is in San Bruno, California. YouTube,
12 LLC is a wholly owned subsidiary of Google. YouTube, LLC transacts or has transacted business
13 in this District and throughout the United States. At all times material to this Complaint, acting
14 alone or in concert with defendant Google, YouTube, LLC has advertised, marketed, and
15 distributed its YouTube social media platform to consumers throughout the United States. At all
16 times material to this Complaint, acting alone or in concert with Google, YouTube, LLC
17 formulated, directed, controlled, had the authority to control, or participated in the acts and
18 practices set forth in this Complaint.

19 39. Defendants Alphabet, XXVI Holdings, Google, and YouTube, LLC are hereinafter
20 collectively referred to as “YouTube.”

21 **3. Snap Inc.**

22 40. Defendant Snap Inc. (“Snap”) is a Delaware corporation with its principal place of
23 business in Santa Monica, California. Snap transacts or has transacted business in this District and
24 throughout the United States. At all times material to this Complaint, acting alone or in concert
25 with others, Snap has advertised, marketed, and distributed the Snapchat social media platform to
26 consumers throughout the United States. At all times material to this Complaint, Snap formulated,
27 directed, controlled, had the authority to control, or participated in the acts and practices set forth
28 in this Complaint.

1 **4. TikTok and ByteDance Entities**

2 41. Defendant TikTok Inc. (“TikTok”) was incorporated in the State of California on
3 April 30, 2015, with its principal place of business in Culver City, California. TikTok Inc.
4 transacts or has transacted business in this District and throughout the United States. At all times
5 material to this Complaint, acting alone or in concert with others, TikTok Inc. has advertised,
6 marketed, and distributed the TikTok Inc. social media platform to consumers throughout the
7 United States. At all times material to this Complaint, acting alone or in concert with ByteDance
8 (defined below), TikTok Inc. formulated, directed, controlled, had the authority to control, or
9 participated in the acts and practices set forth in this Complaint.

10 42. Defendant ByteDance Inc. (“ByteDance”) is a Delaware corporation with its
11 principal place of business in Mountain View, California. ByteDance transacts or has transacted
12 business in this District and throughout the United States. At all times material to this Complaint,
13 acting alone or in concert with others, ByteDance has advertised, marketed, and distributed the
14 TikTok Inc. social media platform to consumers throughout the United States. At all times
15 material to this Complaint, acting alone or in concert with TikTok Inc., ByteDance formulated,
16 directed, controlled, had the authority to control, or participated in the acts and practices set forth
17 in this Complaint. TikTok Inc. and ByteDance are hereinafter collectively referred to as “TikTok.”

18 **IV. FACTUAL ALLEGATIONS**

19 43. The dawn of the social media era is generally considered to be approximately 2006
20 to 2007, when, on the heels of Yahoo’s failed attempt to acquire Facebook for \$1 billion, Facebook
21 revamped its home page to launch a newsfeed that provided each user with a continuous
22 personalized feed of what that user’s friends were doing.²⁹ The newsfeed drove engagement and
23 thus advertising revenue as Facebook membership exploded by 600% to 700%, and suddenly
24 “everyone had total, unblinking visibility into the digital lives of everyone else.” When the
25 newsfeed launched in 2006, 11% of Americans were on social media (between 2% and 4% used

26
27 ²⁹ *Chaos Machine* at 20-21.

Facebook).³⁰ By fall 2007, Facebook was valued at \$15 billion. By 2014, nearly two-thirds of Americans used social media platforms, with Facebook and YouTube being nearly universal.

A. Social Media Addiction Is Prevalent Among America's Youth

44. Social Media has been likened to a “casino that fits in your pocket,” training us to “answer any dip in our happiness with a pull at the most ubiquitous slot machine in history.”³¹ Researchers studying the effect social media has on the brain have shown that social media exploits “the same neural circuitry” as “gambling and recreational drugs to keep consumers using their products as much as possible.” All are addictive because of the neurological chemical dopamine, which is released with the pulsing colorful notification sounds and vibrations associated with a “reward” – for example, a Snapchat with a friend.³² “But when that dopamine reward system gets hijacked, it can compel you to repeat self-destructive behaviors. To place one more bet, binge on alcohol – or spend hours on apps even when they make you unhappy.”³³

45. Defendants deliberately designed and marketed exploitative and addictive social media platforms specifically targeting youth. They have been extremely successful in their efforts. Ninety percent of children aged 13 to 17 use social media.³⁴ Younger children also regularly use social media. One study reported 38% of children aged 8 to 12 used social media in 2021.³⁵ Other

³⁰ *Chaos Machine* at 23.

³¹ *Chaos Machine* at 27.

³² *Chaos Machine* at 26.

³³ *Id.*

³⁴ *Social Media and Teens*, Am. Acad. Child & Adolescent Psych. (Mar. 2018), https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx.

³⁵ Victoria Rideout et al., *The Common Sense Census: Media Use by Tweens and Teens* at 5, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

1 studies reveal numbers as high as 49% of children aged 10 to 12 use social media and 32% of
2 children aged 7 to 9 use social media.³⁶

3 46. The most popular of these platforms is YouTube. A vast majority – 95% – of
4 children aged 13 to 17 have used YouTube.³⁷

5 47. TikTok has skyrocketed in popularity with teenagers since its merger with
6 Musical.ly in 2018. TikTok is now the second most popular social media platform, with over 67%
7 of children aged 13 to 17 having used the app.³⁸

8 48. Instagram's numbers are comparable to TikTok, with 62% of children aged 13 to
9 17 reporting they have used the app.³⁹

10 49. Snapchat also remains popular with youth, with 59% of children aged 13 to 17
11 reporting they have used the app.⁴⁰

12 50. Facebook is the fifth most popular social media platform, with 32% of children
13 aged 13 to 17 reporting they have used Facebook's app or website.⁴¹

14 51. Teenagers who use these social media platforms are also likely to use them
15 continuously. One study estimates that 62% of children aged 13 to 18 use social media every
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20 ³⁶ *Sharing Too Soon? Children and Social Media Apps*, 39(4) C.S. Mott Child.'s Hosp. Univ.
21 Mich. Health (Oct. 18, 2021), https://mottpoll.org/sites/default/files/documents/101821_SocialMedia.pdf.

22 ³⁷ Emily A. Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
23 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

24 ³⁸ *Id.*

25 ³⁹ *Id.*

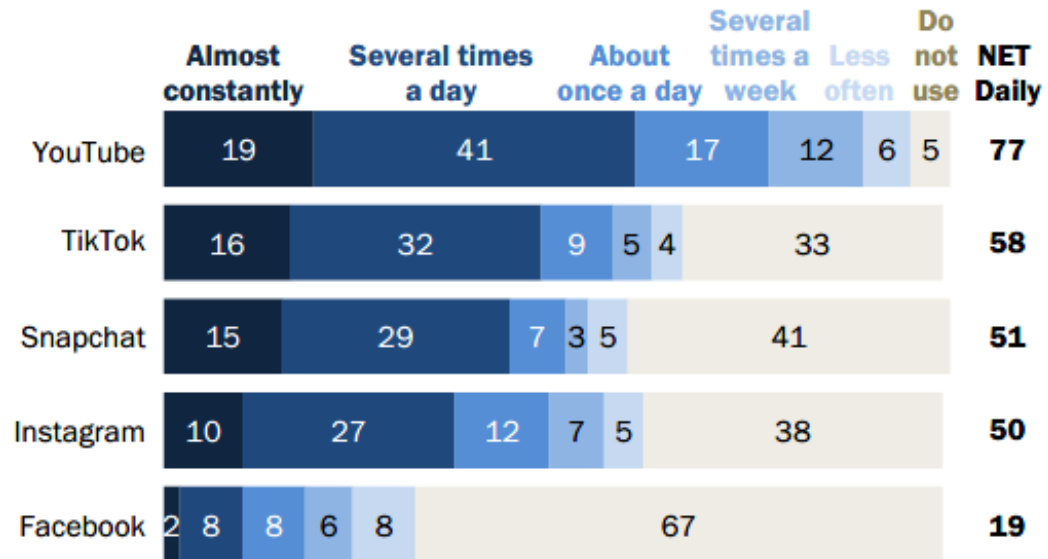
26 ⁴⁰ *Id.*

27 ⁴¹ *Id.*

day.⁴² An increasing number of younger children also use social media daily, with 18% of children aged 8 to 12 reporting using a social media site at least once a day.⁴³

52. Daily use for many teenagers does not consist of logging onto a platform just once. Rather, many teenage users check social media repeatedly throughout the day. In one study, teenage users reported checking Snapchat 30 times a day on average.⁴⁴

53. Even more alarming, some teenagers never stop looking at social media.⁴⁵



Note: Teens refer to those ages 13 to 17. Those who did not give an answer are not shown.

Figures may not add up to the NET values due to rounding.

Source: Survey conducted April 14-May 4, 2022.

"Teens, Social Media and Technology 2022"

PEW RESEARCH CENTER

⁴² Victoria Rideout et al., *The Common Sense Census: Media Use by Tweens and Teens* at 4, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

⁴³ *Id.* at 5.

⁴⁴ Erinn E. Murphy et al., *Taking Stock with Teens: 21 Years of Researching U.S. Teens GenZ Insights* at 13, Piper Sandler (Fall 2021), https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-0e3adfcdbd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top.

⁴⁵ Victoria Rideout et al., *The Common Sense Census: Media Use by Tweens and Teens* at 4, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf; Emily A. Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

1 54. Nearly 32% of teens have declared YouTube the app they would not want to live
2 without almost constantly.⁴⁶ Nearly 16% and 15% of teens report that they constantly use TikTok
3 and Snapchat, respectively.⁴⁷ Meanwhile, 10% of teens use Instagram almost constantly.⁴⁸ Thirty-
4 two percent of teens report using Facebook.⁴⁹

5 55. Teenagers are aware that social media has a significant hold on their lives, yet they
6 still cannot stop using it. Thirty-six percent of teenagers admit they spend too much time on social
7 media.⁵⁰ Over half of teens say that giving up social media would be somewhat hard, with nearly
8 one in five teens saying giving up social media would be very hard.⁵¹ Of the subgroup of teenagers
9 who use at least one platform “almost constantly,” 71% said giving up social media would be hard,
10 with 32% saying giving up social media would be very hard.⁵²

11 56. Teenagers report symptoms of addiction disorders with regard to social media. For
12 instance, the more teenagers use social media, the harder it is for them to give it up. Teenagers
13 who acknowledge that they spend too much time on social media are almost twice as likely to say
14 that giving up social media would be difficult as teens who see their social media usage as about
15 right.⁵³

19 ⁴⁶ Emily A. Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
20 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

21 ⁴⁷ *Id.*

22 ⁴⁸ *Id.*

23 ⁴⁹ *Id.*

24 ⁵⁰ *Id.*

25 ⁵¹ *Id.*

26 ⁵² *Id.*

27 ⁵³ *Id.*

1 57. Despite using social media frequently, most youth do not enjoy it.⁵⁴

2 **B. Social Media Has Widespread, Harmful, and Often Tragic Effects on**
 3 **Youth Mental Health**

4 58. The dimensions of the youth mental health crisis are alarming by all accounts.
 5 There are many severe and broadly negative effects of social media use on youth mental health.
 6 Social media use is linked to increases in mental, emotional, developmental, and behavioral
 7 disorders. They include cyberbullying, eating disorders, cutting, depression, anxiety, sleep
 8 disorders, vandalism, violence, and suicide-related outcomes. These negative impacts have been
 9 demonstrated by both independent research and internal data from the social media platforms
 10 themselves.

11 59. In general, electronic screen use causes lower psychological well-being.⁵⁵ This link
 12 is especially apparent among adolescents. Those with high screen time are twice as likely to
 13 receive diagnoses of depression or anxiety or to need treatment for mental or behavioral health
 14 conditions compared to low screen time users.⁵⁶

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20 ⁵⁴ Victoria Rideout et al., *The Common Sense Census: Media Use by Tweens and Teens* at 34,
 21 Common Sense Media (2022), https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

22 ⁵⁵ Jean M. Twenge & W. Keith Campbell, *Associations between screen time and lower*
 23 *psychological well-being among children and adolescents: Evidence from a population-based*
 24 *study*, 12 *Prev. Med. Rep.* 271-83 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214874/>; Ariel Shensa et al., *Social Media Use and Depression and Anxiety Symptoms: A*
 25 *Cluster Analysis*, 42(2) *Am. J. Health Behav.* 116-28 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5904786/>; *Effects of Social Media on Children*, Cleveland Clinic (Dec. 3, 2021),
 26 <https://health.clevelandclinic.org/dangers-of-social-media-for-youth/>.

27 ⁵⁶ Jean M. Twenge & W. Keith Campbell, *Associations between screen time and lower*
 28 *psychological well-being among children and adolescents: Evidence from a population-based*
 29 *study*, 12 *Prev. Med. Rep.* 271-83 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214874/>.

60. Social media specifically has a “detrimental effect on the psychological health of its users.”⁵⁷ One systematic review of 16 studies on the effects of social media on mental health found social media use increases levels of anxiety and depression.⁵⁸

61. Social media also has detrimental effects on the mental health of adolescents specifically. High social media use increases depressive symptoms, suicide-related outcomes, and suicide rates among adolescents.⁵⁹

62. The harm to youth from social media use increases with the amount of time spent on these platforms. One study found that the investment of time in social media by adolescents is linked to higher levels of depression and lower self-esteem.⁶⁰ “U.S. teenagers who spend 3 hours a day or more on electronic devices are 35% more likely, and those who spend 5 hours or more are 71% more likely, to have a risk factor for suicide than those who spend less than 1 hour.”⁶¹

63. One of the primary reasons the use of social media is associated with depressive symptoms among adolescents is that it encourages unhealthy social comparison and feedback-seeking behaviors.⁶² Because adolescents spend a majority of their time on social media looking at other users’ profiles and photos, they are likely to engage in negative comparisons with their

⁵⁷ Fazida Karim et al., *Social Media Use and Its Connection to Mental Health: A Systemic Review*, 12(6) *Cureus* (June 15, 2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7364393/>.

⁵⁸ *Id.*

⁵⁹ Jean M. Twenge et al., *Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 6(1) *Clinical Psych. Sci.* 3-17 (2017), <https://doi.org/10.1177/2167702617723376>.

⁶⁰ Corey J. Blomfield Neira & Bonnie L. Barber (2014) *Social networking site use: Linked to adolescents’ social self-concept, self-esteem, and depressed mood*, *Australian Journal of Psychology*, 66:1, 56-64, <https://www.tandfonline.com/doi/full/10.1111/ajpy.12034>.

⁶¹ Anne Sheehan, *Letter from JANA Partners & CalSTRS to Apple, Inc.*, Harvard Law School Forum on Corporate Governance (Jan. 19, 2018), <https://corpgov.law.harvard.edu/2018/01/19/joint-shareholder-letter-to-apple-inc/> (citing Jean M. Twenge, PhD. *iGen*. New York: Atria Books (an imprint of Simon & Schuster), 2017).

⁶² Jacqueline Nesi & Mitchell J Prinstein, *Using Social Media for Social Comparison and Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms*, 43(8) *J. Abnormal Child Psych.* 1427-38 (Nov. 2015), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/>.

1 peers.⁶³ Specifically, adolescents are likely to engage in harmful upward comparisons with others
 2 whom they perceive to be more popular.⁶⁴

3 64. Through likes and follows, teens are “getting actual data on how much people like
 4 them and their appearance,” says Lindsey Giller, a clinical psychologist at the Child Mind Institute
 5 who specializes in youth and young adults with mood disorders.⁶⁵ This leads to teens with
 6 “anxiety, poor self-esteem, insecurity, and sadness attributed, at least in part, to constant social
 7 media use.”⁶⁶

8 65. Clinicians have also observed a clear relationship between youth social media use
 9 and disordered eating behavior.⁶⁷ The more social media accounts an adolescent has, the greater
 10 disordered eating behaviors they exhibit. Additionally, research shows the more time young girls
 11 spend on social media platforms, such as Instagram and Snapchat, the more likely they are to
 12 develop disordered eating behaviors.⁶⁸

13 66. Social media has created an environment where self-harm and suicidality is
 14 glorified, promoting youth to compete for who can cut the deepest or starve themselves the most.⁶⁹

16 ⁶³ *Id.*; see also Nino Gugushvili et al., *Facebook use intensity and depressive symptoms: a*
 17 *moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at
 18 3, BMC Psych. 10, 279 (Nov. 28, 2022), <https://doi.org/10.1186/s40359-022-00990-7> (explaining
 that youth are particularly vulnerable because they “use social networking sites for construing their
 identity, developing a sense of belonging, and for comparison with others”).

19 ⁶⁴ *Id.*

20 ⁶⁵ Leah Shafer, *Social Media and Teen Anxiety*, Harv. Grad. Sch. of Educ., Rsch. Stories (Dec.
 21 15, 2017), <https://www.gse.harvard.edu/news/uk/17/12/social-media-and-teen-anxiety>.

22 ⁶⁶ *Id.*

23 ⁶⁷ Simon M. Wilksch et al., *The relationship between social media use and disordered eating in*
 24 *young adolescents*, 53 Int’l J. Eating Disorders 96-106 (2020), <https://pubmed.ncbi.nlm.nih.gov/31797420/>.

25 ⁶⁸ *Id.*

26 ⁶⁹ Cindy Krischer Goodman, *Hiding in plain sight: Inside the online world of suicidal teens*
 27 *anguished, armed and impulsive*, S. Fla. Sun-Sentinel (Jan. 12, 2020), <https://www.sun-sentinel.com/news/florida/fl-ne-teen-suicide-hidden-online-world-20200110-tj767jdoerh4jpw5zaomv26eum-story.html>.

Experts say that sharing pictures of harmful practices encourages others to harm themselves by, in essence, normalizing the behavior.⁷⁰

67. Social media has also caused an increase in cyberbullying. The more time an individual, especially males, spends on social media, the more likely they are to commit acts of cyberbullying.⁷¹ Cyberbullying is now so common that most American teens, 59%, have experienced some form of the behavior.⁷² This number includes: (a) 42% of teens experiencing name calling; (b) 32% being subjected to false rumors; (c) 25% receiving an unsolicited explicit image; (d) 21% being subjected to online stalking; (e) 16% receiving physical threats online; and (f) 7% having had explicit images of them shared without their consent.⁷³ Exposure to cyberbullying on social media is even more prevalent for youth identifying as LGBTQ, and is linked with increased reporting of depression and suicidality in the LGBTQ youth population.⁷⁴

68. Social media has also played a role in perpetuating youth violence by, for example, amplifying gang communications promoting and calling for violence or promoting fight compilations to millions of viewers. Continual exposure to such violence can have adverse effects on youth. Meta-analyses of the unhealthy effects of media violence have shown that youth who

⁷⁰ Kimberly Leonard, *Is Social Media Making Self-Harm Worse for Teens?*, U.S. News (May 29, 2015), <https://www.usnews.com/news/articles/2015/05/29/is-social-media-making-self-harm-worse-for-teens>.

⁷¹ Amanda Giordano et al., *Understanding Adolescent Cyberbullies: Exploring Social Media Addiction and Psychological Factors*, 7(1) J. Child & Adolescent Counseling 42-55 (2021), <https://www.tandfonline.com/doi/abs/10.1080/23727810.2020.1835420?journalCode=ucac20>.

⁷² Monica Anderson, *A Majority of Teens Have Experienced Some Form of Cyberbullying*, Pew Rsch. Ctr. (Sept. 27, 2018), <https://www.pewresearch.org/internet/2018/09/27/a-majority-of-teens-have-experienced-some-form-of-cyberbullying/>.

⁷³ *Id.*

⁷⁴ Cesar G. Escobar-Viera, et al., *For Better or for Worse? A Systematic Review of the Evidence on Social Media Use and Depression Among Lesbian, Gay, and Bisexual Minorities*, JMIR Mental Health (Mar. 23, 2018), <https://mental.jmir.org/2018/3/e10496>

view violent content regularly are more likely to exhibit antisocial behavior, accept violent behavior, and experience increased feelings of hostility.⁷⁵

69. Social media use also contributes to sleep deprivation. Young adults who spend a lot of time on social media during the day or check it frequently throughout the week are more likely to suffer sleep disturbances than their peers who use social media infrequently.⁷⁶ In turn, disturbed and insufficient sleep is associated with poor health outcomes, such as weight gain and high blood pressure.⁷⁷ Sleep deprivation in youth is also linked to depressive symptoms and mood.⁷⁸

70. Teens who spend five or more hours a day on electronic devices are over 50% more likely to experience sleep deprivation than youth who spend less than one hour per day.⁷⁹

71. Defendants exacerbate the disruption of sleep by sending push notifications and emails either at night when children should be sleeping or during school hours when they should be studying, thereby prompting children to reengage with defendants' platforms at times when using them is harmful to their health and well-being.⁸⁰

⁷⁵ Britany Bostic, *Does Social Media Perpetuate Youth Violence?*, Mich. Youth Violence Prevention Ctr. (Feb. 20, 2014), <https://yvpc.sph.umich.edu/social-media-perpetuate-youth-violence/>.

⁷⁶ Jessica C. Levenson, et al., *The Association Between Social Media Use and Sleep Disturbance Among Young Adults*, 85 Preventive Med. 36-41 (Apr. 2016), <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>.

⁷⁷ *Id.*; see also Jean M. Twenge, PhD, *iGen*. New York: Atria Books (an imprint of Simon & Schuster), 2017.

⁷⁸ Lynette Vernon, et al., *Tracking Effects of Problematic Social Networking on Adolescent Psychopathy: The Mediating Role of Sleep Disruptions*, Journal of Clinical Child & Adolescent Psychology (August 2016), https://www.researchgate.net/publication/305925717_Tracking_Effects_of_Problematic_Social_Networking_on_Adolescent_Psychopathology_The_Mediating_Role_of_Sleep_Disruptions.

⁷⁹ Ann Sheehan, *Letter from JANA Partners & CalSTRS to Apple, Inc.*, Harvard Law School Forum on Corporate Governance (Jan. 19, 2018), <https://corpgov.law.harvard.edu/2018/01/19/joint-shareholder-letter-to-apple-inc/> (citing Jean M. Twenge, PhD, *iGen*. New York: Atria Books (an imprint of Simon & Schuster), 2017).

⁸⁰ See, e.g., Beatrice Nolan, *Kids are waking up in the night to check their notifications and are losing about 1 night's worth of sleep a week, study suggests*, Bus. Insider (Sept. 19, 2022),

72. Children are especially at risk of developing harmful behaviors because their prefrontal cortices are not fully developed.⁸¹ The prefrontal cortex is the part of the brain implicated in planning complex cognitive behavior, expressing one's personality, making decisions, and moderating social behavior. Consequently, they find it particularly difficult to exercise the self-control required to regulate their own use of defendants' platforms. In this regard, self-regulation allows people to delay gratification, postponing an immediate reward for a better reward later. Adolescents' undeveloped capacity for self-regulation means they are particularly vulnerable to the immediately pleasurable, but ultimately harmful, effects of the repeated dopamine spikes caused by an external stimulus, such as "likes" that activate the reward system in the brain.⁸²

73. These reward-based learning systems "contribute to the maintenance of excessive usage patterns."⁸³ Researchers investigating the "directionality between use of social networking [platforms] and problematic use" have found that "increases in the intensity of use . . . predict[] problematic use."⁸⁴ Empirical studies have found that problematic use is associated with "insomnia, stress, relationship dissatisfaction, anxiety, social anxiety, and depressive symptoms."⁸⁵

74. In this regard, adolescents are especially vulnerable to long-term harm from defendants' platforms because excessive and problematic use can disrupt their brains' development at a critical stage.

<https://www.businessinsider.com/social-media-costing-children-one-night-sleep-study-2022-9> (approximately 12.5% of children report waking up to check social media notifications).

⁸¹ Nino Gugushvili et al., *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, BMC Psych. 10, 279 (Nov. 28, 2022), <https://doi.org/10.1186/s40359-022-00990-7>.

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.* (collecting sources).

75. Indeed, studies have shown that the mental health challenges to emotional regulation and well-being caused by social media use continue on into young adulthood. For example, a nationally-representative sample of over 1,700 U.S. emerging adults (defined as aged 18-29) found that problematic social media use was associated with depressive symptoms in those studied.⁸⁶

C. America's Youth Are Facing a Mental Health Crisis

76. The number of young people using defendants' social media platforms and the intensity with which they use them has increased significantly since 2008, which has contributed to a wide range of negative effects on youth mental health. The incidence of young people experiencing depression, contemplating suicide, seeking emergency room help for mental health issues, and – tragically – committing suicide has soared.

77. On December 7, 2021, these issues led the United States Surgeon General to issue an advisory on the youth mental health crisis.⁸⁷ In issuing the advisory, the Surgeon General noted: ““Mental health challenges in children, adolescents, and young adults are real and widespread. Even before the pandemic, an alarming number of young people struggled with feelings of helplessness, depression, and thoughts of suicide – and rates have increased over the past decade.””⁸⁸

78. While the report highlights ways in which the COVID-19 pandemic has exacerbated mental health issues for American youth, it also highlights the mental health challenges youth faced before the pandemic. Specifically, the report notes that before the

⁸⁶ Ariel Shensam MA, et al., *Problematic Social Media Use and Depressive Symptoms among U.S. Young Adults: a Nationally-Representative Study*. Soc Sci Med. (Apr. 24, 2017). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5476225/>.

⁸⁷ *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory*, U.S. Dep't Health & Hum. Servs. (Dec. 7, 2021), <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

⁸⁸ Press Release, U.S. Dep't Health & Hum. Servs., *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic* (Dec. 7, 2021), <https://www.njsba.org/news-publications/school-board-notes/december-14-2021-vol-xlv-no-18/surgeon-general-warning-mental-health-crisis-for-youths/>.

1 pandemic “mental health challenges were the leading cause of disability and poor life outcomes in
2 young people.”⁸⁹

3 79. Before the pandemic, one in five children in the United States had a mental,
4 emotional, developmental, or behavioral disorder.⁹⁰

5 80. “In 2021, 42% of high school students felt so sad or hopeless almost every day for
6 at least two weeks in a row that they stopped doing their usual activities.”⁹¹ Female students were
7 more likely than male students to experience these “persistent feelings of sadness or
8 hopelessness.”⁹² From 2011 to 2021, the rate of female high school students who reported
9 persistent feelings of sadness or hopelessness increased from 36% to 51% (to one out of every two
10 female children), and the rate of male high school students increased from 21% to 29%.⁹³

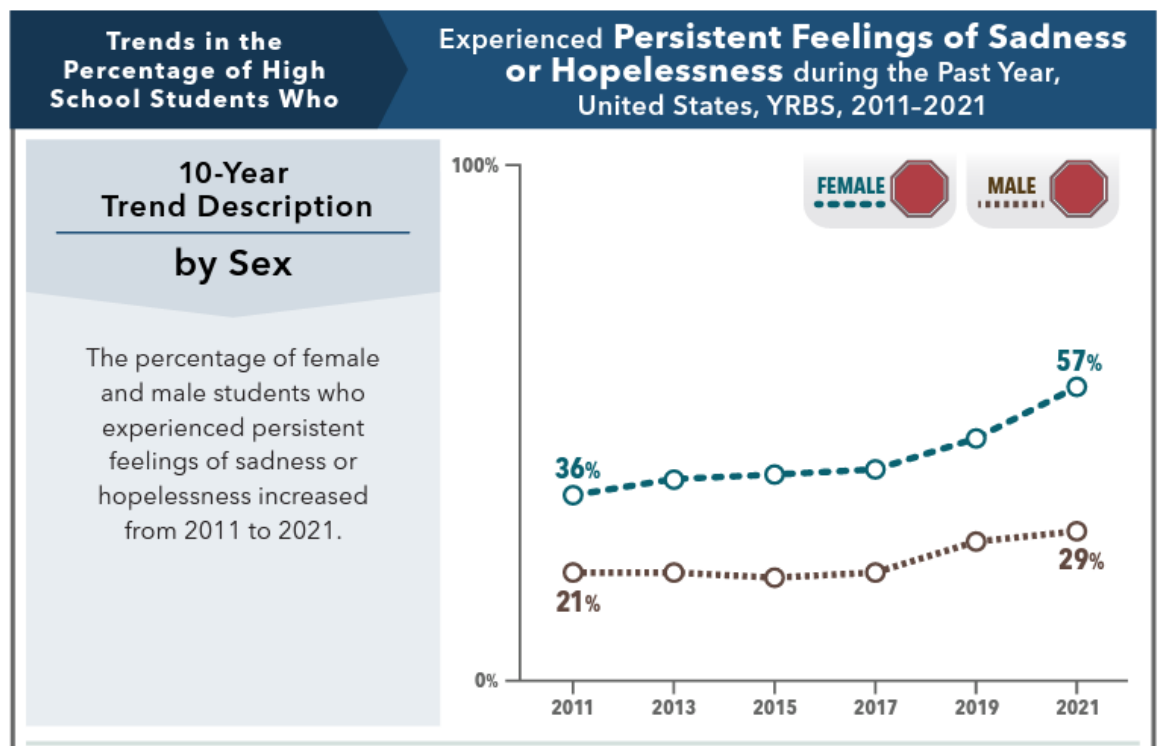
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21 ⁸⁹ *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory*, U.S. Dep’t Health &
22 Hum. Servs. (Dec. 7, 2021), <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

23 ⁹⁰ *Id.*

24 ⁹¹ *Youth Risk Behavior Survey: Data summary & Trends Report* at 60, CDC (Feb. 13, 2023),
25 [https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_](https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_Report2023_508.pdf)
[Report2023_508.pdf](https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_Report2023_508.pdf).

26 ⁹² *Id.*

27 ⁹³ *Id.* at 60-66.



81. The share of children seriously considering attempting suicide increased 11% from 2011 to 2021, up to 22% of all high school students. The share who created a suicide plan increased to 18%.⁹⁴

82. From 2007 to 2018, suicide rates among youth aged 10 to 24 in the United States increased by 57%.⁹⁵ By 2018, suicide was the second leading cause of death for youth aged 10 to 24.⁹⁶

⁹⁴ Sandy Cohen, *Suicide rate highest among teens and youth adults*, UCLA Health (Mar. 15, 2022), <https://www.uclahealth.org/news/suicide-rate-highest-among-teens-and-young-adults>.

⁹⁵ *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory*, U.S. Dep't Health & Hum. Servs. (Dec. 7, 2021), <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

⁹⁶ *AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health*, Am. Acad. Pediatrics (Oct. 19, 2021), <https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/>.

83. From 2007 to 2016, emergency room visits for youth aged 5 to 17 rose 117% for anxiety disorders, 44% for mood disorders, and 40% for attention disorders.⁹⁷

84. This and other data led the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the Children's Hospital Association to join the Surgeon General and declare a national emergency in child and adolescent mental health.⁹⁸

85. President Joe Biden also addressed the mental health harms defendants' platforms have caused to youth in his State of the Union address in 2022, noting that youth were struggling from the harms of social media even before the pandemic. He called on all to "hold social media platforms accountable for the national experiment they're conducting on our children for profit."⁹⁹

D. Social Media Has Had a Harmful Effect on Schools

86. School districts are uniquely harmed by the current youth mental health crisis. This is because schools are one of the main providers for mental health services for school-aged children.¹⁰⁰ Indeed, over 3.1 million children aged 12 to 17 received mental health services through an education setting in 2020, more than any other non-specialty mental health service setting.¹⁰¹

87. Most schools must now offer mental health services to students. In the 2021-2022 school year, 96% of public schools reported offering at least one type of mental health service to

⁹⁷ Matt Richtel, *A Teen's Journey Into the Internet's Darkness and Back Again*, N.Y. Times (Aug. 22, 2022), <https://www.nytimes.com/2022/08/22/health/adolescents-mental-health-technology.html>.

⁹⁸ AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health, Am. Acad. Pediatrics (Oct. 19, 2021), <https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/>.

⁹⁹ President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at <https://www.whitehouse.gov/state-of-the-union-2022/>).

¹⁰⁰ *National Survey on Drug Use and Health*, SAMHSA (see compendium of tables, tables 8.1-8.71 for 1Q20 and 4Q20), <https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables>.

¹⁰¹ *Id.*

1 their students.¹⁰² However, 88% of public schools did not strongly agree that they could effectively
 2 provide mental health services to all students in need.¹⁰³ The most common barriers to providing
 3 effective mental health services are: (a) insufficient number of mental health professionals;
 4 (b) inadequate access to licensed mental health professionals; and (c) inadequate funding.¹⁰⁴
 5 Student opinions also reflect that schools are unable to provide adequate mental health services.
 6 Less than a quarter of students in grades 6 through 12 report accessing counseling or psychological
 7 services when they are upset, stressed, or having a problem.¹⁰⁵ Of the students who access mental
 8 health services, only 41% of middle schoolers and 36% of high schoolers are satisfied with the
 9 services they receive.¹⁰⁶

10 88. In part, schools are struggling to provide adequate mental health services because
 11 of the increase in students seeking these services. More than two-thirds of public schools reported
 12 an increase in the percentage of students seeking mental health services from school since the start
 13 of the pandemic.¹⁰⁷

14 89. During this same period, adolescents increased their social media use, also raising
 15 levels of excessive and problematic use of digital media.¹⁰⁸ These higher rates of social media use
 16

17 ¹⁰² *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health*
 18 *Services to All Students In Need*, Nat'l Ctr. Educ. Stat. (May 31, 2022),
https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp.

19 ¹⁰³ *Id.*

20 ¹⁰⁴ *Id.*

21 ¹⁰⁵ *Insights From the Student Experience, Part I: Emotional and Mental Health* at 2, YouthTruth
 22 (2022), https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf.

23 ¹⁰⁶ *Id.*

24 ¹⁰⁷ *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health*
 25 *Services to All Students In Need*, Nat'l Ctr. Educ. Stat. (May 31, 2022),
https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp.

26 ¹⁰⁸ Laura Marciano et al., *Digital Media Use and Adolescents' Mental Health During the Covid-19*
 27 *Pandemic: A Systematic Review and Meta-Analysis*, Frontiers Pub. Health (Feb. 1, 2022),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8848548/>.

are related to increased rates of “ill-being.”¹⁰⁹ Thus, the increase in adolescent social media use during the pandemic has caused an increase in adolescents experiencing mental health problems.

90. That relationship is reflected in reports from public schools. Over 75% of public schools reported an increase in staff expressing concerns about student depression, anxiety, and other disturbances since the start of the pandemic.¹¹⁰ Students receiving mental health services in educational settings predominantly do so because they “[f]elt depressed,” “[t]hought about killing [themselves] or tried to,” or “[f]elt very afraid and tense.”¹¹¹

91. Anxiety disorders are also up, affecting 31.9% of adolescents between the ages of 13 and 18.¹¹² “Research shows that untreated teenagers with anxiety disorders are at higher risk to perform poorly in school, miss out on important social experiences, and engage in substance abuse.”¹¹³

92. Schools are struggling not only to provide students with mental health services but also to deliver an adequate education because of the youth mental health crisis. Students in grades 6 through 12 identify depression, stress, and anxiety as the most prevalent obstacles to learning.¹¹⁴ Most middle school and high school students also fail to get enough sleep on school nights, which

¹⁰⁹ *Id.*

¹¹⁰ *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat’l Ctr. Educ. Stat. (May 31, 2022), https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp.

¹¹¹ Rachel N. Lipari et al., *Adolescent Mental Health Service Use and Reasons for Using Services in Specialty, Educational, and General Medical Settings*, SAMHSA (May 5, 2016), [https://www.samhsa.gov/data/sites/default/files/report_1973/ShortReport-1973.html#:~:text=The percent20Substance percent20Abuse percent20and percent20Mental,273 percent20TALK percent20\(8255\)](https://www.samhsa.gov/data/sites/default/files/report_1973/ShortReport-1973.html#:~:text=The percent20Substance percent20Abuse percent20and percent20Mental,273 percent20TALK percent20(8255)).

¹¹² *Anxiety Disorders: Facts and Statistics*, Anxiety & Depression Ass’n Am., <https://adaa.org/understanding-anxiety/facts-statistics> (last visited Feb. 26, 2023).

¹¹³ *Id.*

¹¹⁴ *Insights From the Student Experience, Part I: Emotional and Mental Health at 2-3*, YouthTruth (2022), https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf.

1 contributes to poor academic performance.¹¹⁵ These negative mental health outcomes are also the
 2 most common symptoms of excessive social media use.

3 93. The youth mental health crisis has also caused a wide range of other behavioral
 4 issues among students that interfere with schools' ability to teach. In 2022, 61% of public schools
 5 saw an increase in classroom disruptions from student misconduct compared to school years before
 6 the pandemic.¹¹⁶ Fifty-eight percent of public schools also saw an increase in rowdiness outside
 7 of the classroom, 68% saw increases in tardiness, 27% saw increases in students skipping classes,
 8 55% saw increases in the use of electronic devices when not permitted, 37% saw an increase in
 9 bullying, 39% saw an increase in physical fights between students, and 46% saw an increase in
 10 threats of fights between students.¹¹⁷

11 94. Further exacerbating schools' struggles to teach is the fact that students are not
 12 showing up to school. Indeed, student absenteeism has greatly increased. In the 2021-2022 school
 13 year, 39% of public schools experienced an increase in chronic student absenteeism compared to
 14 the 2020-2021 school year, and 72% of public schools saw increased chronic student absenteeism
 15 compared to school years before the pandemic.¹¹⁸ Following suit, vandalism has increased in
 16 2022, with 36% of public schools reporting increased acts of student vandalism on school
 17 property.¹¹⁹

18 95. School districts have borne increased costs and expenses in response to the youth
 19 mental health crisis. These costs include:

21
 22 ¹¹⁵ Anne G. Wheaton et al., *Short Sleep Duration Among Middle School and High School*
 23 *Students-United States, 2015*, 67(3) *Morbidity & Mortality Wkly. Rpt.* 85-90 (Jan. 26, 2018),
<http://dx.doi.org/10.15585/mmwr.mm6703a1>.

24 ¹¹⁶ *2022 School Pulse Panel*, U.S. Dep't Educ., Inst. Educ. Sci. (2022) (collecting information),
<https://ies.ed.gov/schoolsurvey/spp/>.

25 ¹¹⁷ *Id.*

26 ¹¹⁸ *Id.*

27 ¹¹⁹ *Id.*

- 1 • hiring additional mental health personnel (41% of public schools added staff to
2 focus on student mental health);¹²⁰
- 3 • developing additional mental health resources (46% of public schools created or
4 expanded mental health programs for students; 27% added student classes on
5 social, emotional, and mental health; and 25% offered guest speakers for students
6 on mental health);¹²¹
- 7 • training teachers to help students with their mental health (56% of public schools
8 offered professional development to teachers on helping students with mental
9 health);¹²²
- 10 • increasing disciplinary services and hiring additional personnel for disciplinary
11 services in response to increased bullying and harassment over social media;
- 12 • addressing property damaged as a result of students acting out because of mental,
13 social, and emotional problems caused by defendants' conduct;
- 14 • diverting time and resources from instructional activities to notify parents and
15 guardians of students' behavioral issues and attendance;
- 16 • investigating and responding to threats made against schools and students over
17 social media;
- 18 • updating student handbooks to address use of defendants' platforms; and
- 19 • updating school policies to address use of defendants' platforms.

20 **E. Social Media Has Had a Harmful Effect on Broward County Schools**

21 96. Plaintiff's public schools have been directly impacted by the mental health crisis
22 among youth in its community.

23 97. As students' use of defendants' platforms has increased, students' mental,
24 emotional, and social health has declined.

25 98. There has been a surge in the proportion of youth in plaintiff's community who say
26 they cannot stop or control their anxiety, who feel so sad and hopeless that they stop doing the

27 ¹²⁰ *Id.*

28 ¹²¹ *Id.*

¹²² *Id.*

activities that they used to love, who are considering suicide, who made plans to commit suicide, and who have attempted to commit suicide.

99. According to risk behavior surveys conducted by the Florida Department of Health in 2019, students in Broward reported the following:

(a) 36.9% of high school students reported feeling sad or hopeless;

(b) 24.3% of middle school and 18.6% of high school students reported seriously considering dying by suicide;

(c) 15.5% of middle school and 14.2% of high school students reported making a plan to die by suicide;

(d) 8.7% of middle school and 10.9% of high school students reported actually attempting suicide;

(e) 23% of middle school and 8.3% of high school students reported carrying a weapon;

(f) 8% of high school students reported being threatened or injured with a weapon on school property;

(g) 37% of high school students reported not going to school because they felt unsafe; and

(h) 17.4% of middle school and 12.1% of high school students reported being electronically bullied.¹²³

100. All but one of these survey findings trended upward between the period of 2013-2019.¹²⁴

101. This crisis has led to a marked increase in the number of plaintiff's students in need of mental health services.

¹²³ *Youth Risk Behavior Survey 2019 Results*, Broward Cnty. Pub. Schs., https://www.browardschools.com/cms/lib/FL01803656/Centricity/Domain/13726/YRBS%20BCPS%202019%20YRBS%20RESULTS_05112021.pdf.

¹²⁴ *Id.*

102. Broward County has documented instances of teachers devoting resources to addressing students posting “disturbing” messages on social media about their mental health challenges.¹²⁵

103. In an attempt to address the decline in students’ mental, emotional, and social health, plaintiff has been forced to divert resources and expend additional resources to:

- hire additional personnel, including counselors and medical professionals, to address mental, emotional, and social health issues;
- develop additional resources to address mental, emotional, and social health issues;
- increase training for teachers and staff to identify students exhibiting symptoms affecting their mental, emotional, and social health;
- hire additional personnel to respond to and manage efforts to combat harm caused by defendants’ platforms, including cyberbullying, violence and vandalism;
- develop awareness and informational campaigns to educate students about the dangers of using defendants’ platforms;
- train teachers, staff, and members of the community about the harms caused by defendants’ platforms;
- develop trainings, lesson plans, toolkits, books, posters, videos and other materials to teach students about the dangers of using defendants’ platforms;
- update student handbooks to address use of and harm resulting from defendants’ platforms;
- update school policies to address use of and harm resulting from defendants’ platforms;
- update school webpages to address use of and harm resulting from defendants’ platforms; and
- update code of conduct for disciplinary infractions resulting from harm caused by defendants’ platforms.

¹²⁵ Cindy Krischer Goodman, *Hiding in plain sight: Inside the online world of suicidal teens anguished, armed and impulsive*, S. Fla. Sun-Sentinel (Jan. 12, 2020), <https://www.sun-sentinel.com/news/florida/fl-ne-teen-suicide-hidden-online-world-20200110-tj767jdoerh4jpw5zaomv26eum-story.html>.

104. Additionally, more students have been acting out as a result of the decline and harm defendants caused in students' mental, emotional, and social health.

105. In 2016, Broward County Public Schools instituted the Think B4U Post awareness campaign, developing specific tools and programming to support internet safety efforts and "encourage [the] responsible use of social media."¹²⁶

106. In many cases behavioral issues in Broward County schools are directly traceable to the impact of defendants' social media platforms. For instance, in 2021, students in south Florida were found destroying school property as a form of participation in the "devious link" challenge on TikTok, a viral trend encouraging students to vandalize and otherwise destroy school property.¹²⁷

107. The negative trends on TikTok were not just limited to encouraging vandalism at school; some were considerably more dangerous, leading to threats of school shootings and other violence.

108. Broward County public schools have been forced to address a number of severe and concerning risks to their students as a result of social media threats. For instance, in January 2019, a 17-year old Broward student was taken into custody after posting a video to Snapchat, depicting him racking a semi-automatic handgun alongside a text threatening violence.¹²⁸

¹²⁶ *BCPS Launches School Pride and Peace Initiative Events Focused on Celebrating School Pride and Peaceful Learning Environments*, Broward Cnty. Pub. Schs. (Oct. 9, 2021), <https://www.browardschools.com/site/default.aspx?PageType=3&DomainID=14019&ModuleInstanceID=60855&ViewID=6446EE88-D30C-497E-9316-3F8874B3E108&RenderLoc=0&FlexDataID=241279&PageID=0>.

¹²⁷ Eileen Kelley, *South Florida students trash school bathrooms as they mimic TikTok 'devious lick' trend*, S. Fla. Sun-Sentinel (Sept. 21, 2021), <https://www.sun-sentinel.com/news/education/fl-ne-tiktok-bathroom-palm-beach-warning-20210921-a2eklgy74zgmxioln66f4yjzhm-story.html>.

¹²⁸ *Broward Teen Arrested For Posting Threat With Gun On Snapchat*, CBS Miami (Jan. 14, 2019), <https://www.cbsnews.com/miami/news/teen-arrested-posting-threat-gun-snapchat/>.

109. In December 2019, a 12-year-old Broward girl was arrested after posting a “death list” on Snapchat of students from her middle school, indicating they were in danger and would be killed at the school.¹²⁹

110. In October 2021, a 15-year-old girl was arrested after using her Instagram account to target five Broward County schools, threatening shootings.¹³⁰

111. Such threats on social media have caused disruption to Broward County public schools, including leading the district to lock down its campuses in response.¹³¹

112. In response to the onslaught of negative social media trends encouraging negative and potentially dangerous activities at school in 2019, plaintiff, in collaboration with the Florida Department of Juvenile Justice kicked off the “It’s No Joke” school threats awareness campaign. The campaign seeks to educate youth and parents on the consequences of making school threats, including on social media and gaming sites, which can lead to a felony offense.¹³²

113. Plaintiff has been forced to divert resources and expend additional resources to:

(a) repair property damaged as a result of the exploitative and harmful content defendants directed at students;

(b) increase disciplinary services and time spent addressing bullying, harassment, and threats;

¹²⁹ Joshua Rhett Miller, *Florida girl arrested for posting ‘death list’ on Snapchat*, N. Y. Post (Dec. 9, 2019), <https://nypost.com/2019/12/09/florida-girl-arrested-for-posting-death-list-on-snapchat/>.

¹³⁰ Alex Browing, *Teen arrested, police continue to investigate after threats posted to social media for multiple Broward schools*, 7 News Miami (Oct. 18, 2021), <https://wsvn.com/news/local/teen-arrested-police-continue-to-investigate-after-threats-posted-to-social-media-for-multiple-broward-schools/>

¹³¹ Eileen Kelley, *South Florida students trash school bathrooms as they mimic TikTok ‘devious lick’ trend*, S. Fla. Sun-Sentinel (Sept. 21, 2021), <https://www.sun-sentinel.com/news/education/fl-ne-tiktok-bathroom-palm-beach-warning-20210921-a2eklgy74zgmxioln66f4yjzhm-story.html>.

¹³² Brianda Villegas, *The Florida Department of Juvenile Justice launches “It’s No Joke” campaign*, ABC – WCJB TV20 (Sept. 17, 2019), <https://www.wcjb.com/content/news/The-Florida-Department-of-Juvenile-Justice-launches-Its-No-Joke-campaign-560585601.html>.

1 (c) confiscate devices on which students were compelled by defendants’
 2 conduct to use while in class or on school campuses to access defendants’ platforms;

3 (d) meet with students and the parents of students caught using defendants’
 4 platforms at school;

5 (e) divert time and resources from instructional activities to notify parents and
 6 guardians of students’ behavioral issues and attendance; and

7 (f) investigate and respond to threats made against schools and students over
 8 social media.

9 114. As of 2020, Broward County Public Schools employed 47 family therapists, 136
 10 school social workers, 120 school psychologists, and 436 certified school counselors.¹³³

11 115. And yet, even with these resources, plaintiff cannot keep up with the increased need
 12 for mental health services because of the youth mental health crisis.

13 116. Plaintiff requires significantly greater and long-term funding to address the
 14 epidemic defendants have created. It is time, as President Biden declared, to get “all Americans
 15 the mental health services they need.”¹³⁴

16 **F. Defendants Intentionally Design, Operate, and Market Their Social**
 17 **Media Platforms for Youth Users**

18 117. This mental health crisis among America’s youth is the result of defendants’ actions
 19 to design and market their social media platforms in such a way as to encourage youth addiction
 20 to their platforms.

21 118. Defendants each maintain and operate social media platforms. The interactive
 22 features defendants provide on their platforms are similar in many respects. For example,
 23 Facebook, Instagram, Snap, TikTok, and YouTube all offer tailored “feeds” of content curated by
 24 complex algorithms intended to learn a user’s interests and ways to publicly express affirmation

25 ¹³³ Broward County Public Schools 2020 Mental Health Assistance Allocation Plan
 26 <https://www.fl DOE.org/core/fileparse.php/18612/urlt/Broward1920.pdf>.

27 ¹³⁴ President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at
 28 <https://www.whitehouse.gov/state-of-the-union-2022/>).

1 for such curated content through “likes,” comments, and sharing or reposting the content, which
 2 lead to dopamine spikes, which in turn encourage addiction. These methods are so effective in
 3 promoting use that defendants are known to copy the designs and features of one another.¹³⁵ The
 4 salient features of each of defendants’ social media platforms are described in more detail below.

5 119. Defendants profit from their social media platforms by using them as advertising
 6 platforms. Defendants collect data on their youth users’ viewing habits and behaviors and use that
 7 data to drive youth user engagement by deluging them with salacious content designed to keep
 8 them on the platforms longer and maximize ad revenue. Advertisers pay a premium to target
 9 advertisements to specific categories of users, including youth.

10 120. Defendants view youth, adolescent, and even preadolescent users as among their
 11 most valuable commodities. Youth users are central to defendants’ business model as they are
 12 more likely than adults to use social media. Indeed, 95% of children aged 13 to 17 have cell
 13 phones,¹³⁶ 90% use social media,¹³⁷ and 28% buy products and services through social media.¹³⁸

14 121. To profit from these young users, defendants intentionally market their platforms
 15 to youths and adolescents. For children under 13, the Children’s Online Privacy Protection Act of
 16 1998 (“COPPA”)¹³⁹ regulates the conditions under which defendants’ platforms can collect and
 17 use their information.

18
 19 ¹³⁵ See, e.g., Kevin Hurler, *For Sites Like Instagram and Twitter, Imitation Is the Only Form of*
 20 *Flattery*, Gizmodo (Aug. 16, 2022), <https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419>.

21 ¹³⁶ Emily A. Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
 22 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

23 ¹³⁷ *Social Media and Teens*, Am. Acad. Child & Adolescent Psychiatry (Mar. 2018),
 24 https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx.

25 ¹³⁸ Erinn E. Murphy et al., *Taking Stock with Teens: 21 Years of Researching U.S. Teens GenZ*
 26 *Insights* at 13, Piper Sandler (Fall 2021), https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-0e3adfcdbd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top.

27 ¹³⁹ See 15 U.S.C. §§6501-6506.

122. COPPA requires platforms that either target children under age 13 or have actual knowledge of users under age 13 to obtain “verifiable parental consent” prior to collecting and using information about them.¹⁴⁰ Defendants have blatantly violated COPPA or turned a blind eye to younger users on their platforms by leaving users to self-report their age. More recently, Defendants embarked on a bolder strategy and sought to capture preadolescent audiences by offering “kid versions” of their platforms that, while not collecting and using their information, are reportedly “designed to fuel [children’s] interest in the grown-up version.”¹⁴¹

123. To maximize revenue, Defendants have intentionally designed and operated their platforms to maximize users’ screen time. Defendants have done so by building features and operating their platforms in a manner intended to exploit human psychology using complex algorithms driven by advanced artificial intelligence (“AI”) and machine-learning systems. As stated by Catheryn O’Neil, Ph.D., Harvard mathematician and data scientist, “algorithms are opinions embedded in code . . . algorithms are not objective. Algorithms are optimized to some definition of success. So, if you can imagine, if . . . a commercial enterprise builds an algorithm to their definition of success, it’s a commercial interest. It’s usually profit.”¹⁴² In this regard, in the name of profit, defendants have progressively modified their platforms in ways that promote excessive and problematic use and have done so in ways known to be harmful to children.

124. One way defendants maximize the time users spend on their platforms involves the design of feeds – whether of photos, videos, or sponsored or promoted content. Each uses algorithms to serve users personalized content for them to consume *ad nauseam*. Google’s former design ethicist, Tristan Harris (“Harris”), explained that this never-ending stream is designed to “keep [users] scrolling, and purposely eliminate any reason for [them] to pause, reconsider or

¹⁴⁰ *Id.*

¹⁴¹ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. for Fam. Stud. (Mar. 29, 2022), <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->.

¹⁴² *The Social Dilemma – 2020 Transcript*, Scraps from the Loft (Oct. 3, 2020), <https://scrapsfromtheloft.com/movies/the-social-dilemma-movie-transcript/>.

1 leave.”¹⁴³ Defendants’ feeds take “an experience that was bounded and finite, and turn it into a
 2 bottomless flow that keeps going.”¹⁴⁴ This “flow state,” as psychologists describe it, “fully
 3 immerse[s]” users, distorts their perception of time, and “has been shown to be associated with
 4 problematic use of social networking sites.”¹⁴⁵ As Harris further states:

5 [W]e’ve moved away from having a tools-based technology environment to an
 6 addiction- and manipulation-based technology environment. . . . Social media isn’t
 7 a tool that’s just waiting to be used. It has its own goals, and it has its own means
 8 of pursuing them by using your psychology against you.¹⁴⁶

9 125. A second way social media platforms manipulate users, particularly young ones, is
 10 through social reciprocity. “Reciprocity,” from a psychology perspective, refers to the powerful
 11 social phenomenon of how people respond to positive or, conversely, hostile actions. Reciprocity
 12 means that in response to friendly actions, people respond in a friendly manner and vice versa.¹⁴⁷
 13 Phillip Kunz (“Kunz”) best illustrated the automatic nature of reciprocity through his Christmas
 14 card experiment. In the experiment, Kunz sent a group of complete strangers holiday cards with
 15 pictures of his family and included a brief note.¹⁴⁸ Those people, whom he had never met or
 16 communicated with before, reciprocated, flooding him with holiday cards.¹⁴⁹ The majority of the

17 ¹⁴³ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
 18 <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

19 ¹⁴⁴ *Id.*

20 ¹⁴⁵ Nino Gugushvili et al., *Facebook use intensity and depressive symptoms: a moderated*
 21 *mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, BMC
 Psych. 10, 279 (Nov. 28, 2022), <https://doi.org/10.1186/s40359-022-00990-7>.

22 ¹⁴⁶ *The Social Dilemma – 2020 Transcript*, Scraps from the Loft (Oct. 3, 2020),
<https://scrapsfromtheloft.com/movies/the-social-dilemma-movie-transcript/>.

23 ¹⁴⁷ Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14(3)
 24 J. Econ. Persps. 159-81 (Mar. 2000), https://www.researchgate.net/profile/Ernst-Fehr-2/publication/23756527_Fairness_and_Retaliation_The_Economics_of_Reciprocity/links/5eb024e945851592d6b87d3b/Fairness-and-Retaliation-The-Economics-of-Reciprocity.pdf.
 25

26 ¹⁴⁸ Phillip R. Kunz & Michael Woolcott, *Season’s Greetings: From my status to yours*, 5(3) Soc.
 Sci. Rsch. 269-78 (Sept. 1976), [https://doi.org/10.1016/0049-089X\(76\)90003-X](https://doi.org/10.1016/0049-089X(76)90003-X).

27 ¹⁴⁹ *Id.*

1 responses did not even ask Kunz who he was.¹⁵⁰ They simply responded to his initial gesture with
 2 a reciprocal action.

3 126. Reciprocity is why Facebook and Snapchat automatically tell a “sender when you
 4 ‘saw’ their message, instead of letting you avoid disclosing whether you read it. As a consequence,
 5 you feel more obligated to respond” immediately.¹⁵¹ That keeps users on the platform longer.
 6 Another tactic, push notifications, make users feel psychologically compelled to return to the
 7 platform.

8 127. A third way defendants manipulate users to keep using or coming back to their
 9 platforms is through the use of IVRs. Slot machines are a frequent example of how IVRs work.¹⁵²
 10 Users pull a lever to win a prize. With each pull, the user may or may not win a prize (*i.e.*, an
 11 intermittent reward that varies in value).

12 128. IVRs work by spacing out dopamine triggering stimuli with dopamine gaps,
 13 allowing for anticipation and craving to develop, which strengthens the desire to engage in the
 14 activity with each release of dopamine.

15 129. Defendants bake IVRs into the design and operations of their respective platforms
 16 by “link[ing] a user’s action (like pulling a lever) with a variable reward.”¹⁵³ For example, when
 17 “we swipe down our finger to scroll the Instagram feed, we’re playing a slot machine to see what
 18 photo comes next.”¹⁵⁴ Facebook also delays the time it takes to load the feed. “This is because

19
 20 ¹⁵⁰ *Id.*

21 ¹⁵¹ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
 22 <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

23 ¹⁵² *See, e.g.*, Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17,
 24 2017), <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

25 ¹⁵³ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
 26 <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

27 ¹⁵⁴ *Id.*
 28

without that three-second delay, Instagram wouldn't feel variable."¹⁵⁵ Without that delay, there would be no time for users' anticipation to build. In slot machine terms, there would be "no sense of *will I win?* because you'd know instantly. So the delay isn't the app loading. It's the cogs spinning on the slot machine."¹⁵⁶ Each of defendants' platforms exploits this biochemical reaction among its users, typically using "likes," "hearts," or other forms of approval that serve as the reward.

130. Youth are especially vulnerable both to the ways in which defendants manipulate users to maximize their "watch time" and to the resulting harms. Children's brains undergo a fundamental shift around age 10 that makes "preteens extra sensitive to attention and admiration from others."¹⁵⁷ Consequently, defendants' use of IVRs, reciprocity, and other "rewards" to maximize the time users spend on their platforms exploits a vulnerability unique to youth. This "extra sensitivity" also puts them at greater risk. As Tristan Harris, Google's former design ethicist acknowledged: "Everyone innately responds to social approval, but some demographics, in particular teenagers, are more vulnerable to it than others."¹⁵⁸

131. In adolescence, the structures of the brain that are "'closely tied'" to social media activity and that drive instinctual behavior begin to change.¹⁵⁹ The ventral striatum is one of those structures. It receives a rush of dopamine and oxytocin, known as the "'happy hormones,'" whenever we experience social rewards.¹⁶⁰ Between the ages of 10 and 12, the receptors for those

¹⁵⁵ Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017), <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

¹⁵⁶ *Id.* (emphasis in original)

¹⁵⁷ Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass'n (Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

¹⁵⁸ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int'l (July 27, 2016), <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

1 happy hormones begin to multiply in this region of the brain, which makes compliments on a new
2 hairstyle, laughter from a classmate, or other social rewards “start to feel a lot more satisfying.”¹⁶¹

3 132. Historically, these biological changes incentivized children and teens to develop
4 healthy social skills and connections. “But arriving at school in a new pair of designer jeans,
5 hoping your crush will smile at you in the hallway, is worlds away from posting a video on TikTok
6 that may get thousands of views and likes,” according to Mitch Prinstein (“Prinstein”), Chief
7 Science Officer for the American Psychology Association.¹⁶²

8 133. Part of what makes the “interactions so different” is that they are often permanent
9 and public in nature.¹⁶³ There is no public ledger tracking the number of consecutive days you
10 have spoken to someone like there is for Snap “streaks.” Similarly, “[a]fter you walk away from
11 a regular conversation, you don’t know if the other person liked it, or if anyone else liked it.”¹⁶⁴
12 Conversely, on defendants’ platforms, children, their friends, and even complete strangers can
13 publicly deliver or withhold social rewards in the form of likes, comments, views, and follows.¹⁶⁵

14 134. These social rewards release dopamine and oxytocin into the brains of youth and
15 adults; but there are two key differences, as Prinstein explained: “First, adults tend to have a fixed
16 sense of self that relies less on feedback from peers. Second, adults have a more mature prefrontal
17 cortex, an area that can help regulate emotional responses to social rewards.”¹⁶⁶

18 135. Adolescents, by contrast, are in a “period of personal and social identity formation,”
19 much of which “is now reliant on social media.”¹⁶⁷ “Due to their limited capacity for self-

20 _____
21 ¹⁶¹ *Id.*

22 ¹⁶² Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n
(Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

23 ¹⁶³ *Id.*

24 ¹⁶⁴ *Id.*

25 ¹⁶⁵ *Id.*

26 ¹⁶⁶ *Id.*

27 ¹⁶⁷ Betul Keles et al., *A systematic review: the influence of social media on depression, anxiety*
28 *and psychological distress in adolescents*, Int’l J. Adolescence & Youth (2019) 25:1, 79-93

1 regulation and their vulnerability to peer pressure,” adolescents “are at greater risk of developing
2 mental disorder.”¹⁶⁸

3 136. Together, defendants have designed, refined, marketed, and operated their social
4 media platforms to maximize the number of youths who use their platforms and the time they
5 spend on those platforms by feeding them ever more salacious and often harmful content in ways
6 designed to be addictive. Despite having knowledge of the harm social media causes youth,
7 defendants have continued to create more sophisticated versions of their platforms promoting ever
8 more harmful content. Defendants’ conduct in designing and marketing exploitative and
9 manipulative platforms has resulted in youth spending excessive amounts of time with ever more
10 harmful content on defendants’ platforms.

11 137. Defendants’ efforts have proven wildly successful. The majority of teenagers
12 feverishly use the same five social media platforms: YouTube, TikTok, Instagram, Snapchat, and
13 Facebook.¹⁶⁹ Each of these platforms individually boasts high numbers of teenage users.

14 **G. Facebook and Instagram Have Substantially Contributed to the**
15 **Youth Mental Health Crisis**

16 **1. The Facebook Platform**

17 138. Facebook is a social networking platform owned by Meta.

18 139. Facebook was founded in 2004 and has become the largest social network in the
19 world. As of October 2021, Facebook had approximately 2.9 billion monthly active users,
20 approximately 2 billion of whom use Facebook every day.¹⁷⁰

21 (Mar. 3, 2019), https://www.researchgate.net/publication/331947590;_A_systematic_review_the_influence_of_social_media_on_depression_anxiety_and_psychological_distress_in_adolescents/fulltext/5c94432345851506d7223822/A-systematic-review-the-influence-of-social-media-on-depression-anxiety-and-psychological-distress-in-adolescents.pdf.

24 ¹⁶⁸ *Id.*

25 ¹⁶⁹ Emily A. Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

27 ¹⁷⁰ *See id.*; Stacy Jo Dixon, *Number of Daily Active Facebook Users Worldwide as of 4th Quarter 2022 (in Millions)*, Statista (Feb. 13, 2023), <https://www.statista.com/statistics/346167/facebook-global-dau/>.

1 140. When Facebook was founded in 2004, only students at certain colleges and
2 universities could use the social media platform, and verification of college enrollment was
3 required to access Facebook.

4 141. In 2005, Facebook expanded and became accessible to students at more universities
5 around the world, after which Facebook launched a high school version that also required an
6 invitation to join.

7 142. Facebook later expanded eligibility to employees of several companies, including
8 Apple and Microsoft, and also added more universities to its network.

9 143. In September 2006, Facebook became available to all internet users. At the time,
10 Facebook claimed that it was open only to persons aged 13 and older with a valid email address;
11 however, on information and belief, Facebook did not in fact require verification of a user's age
12 or identity and did not actually verify users' email addresses, such that underage users could easily
13 register an account with and access Facebook.

14 144. Facebook then underwent a series of changes aimed at increasing user engagement
15 and platform growth, without regard to user safety, including the following changes:

- 16 • In 2009, Facebook launched the "like" button;
- 17 • In 2011, Facebook launched Messenger, its direct messaging service, and started
18 allowing people to subscribe to non-friends;
- 19 • In 2012, Facebook started showing advertisements in its newsfeed and launched a
20 real-time bidding system through which advertisers could bid on users based on
their visits to third-party websites;
- 21 • In 2014, Facebook's facial recognition algorithm (DeepFace) reached near-human
22 accuracy in identifying faces;
- 23 • In 2015, Facebook made significant changes to its newsfeed algorithm to determine
24 what content to show users and launched its live-streaming service;
- 25 • In 2016, Facebook launched games for its social media platform so that users could
26 play games without having to install new apps; and
- 27 • In 2017, Facebook launched Facebook Creator, an app for mobile video posts that
28 assists with content creation.

2. The Instagram Platform

145. Instagram is a social media platform that launched in 2010, which Meta acquired for \$1 billion in April 2012.

146. Instagram enables users to share photos and videos with other users and view other users' photos and videos. These photos and videos appear on users' Instagram "feeds," which are virtually bottomless, scrollable lists of content.

147. After being acquired by Meta, Instagram experienced exponential user growth, expanding from approximately ten million monthly active users in September 2012 to more than one billion monthly active users worldwide today, including approximately 160 million users in the United States.¹⁷¹

148. Instagram's user growth was driven by design and development changes to the Instagram platform that increased engagement at the expense of the health and well-being of Instagram's users – especially the children using the platform.

149. For example, in August 2020, Instagram began hosting and recommending short videos to users, called Reels.¹⁷² Like TikTok, Instagram allows users to view an endless feed of Reels that are recommended and curated to users by Instagram's algorithm.

150. Instagram has become the most popular photo-sharing social media platform among children in the United States – approximately 72% of children aged 13 to 17 in the United States use Instagram.¹⁷³

¹⁷¹ Stacy Jo Dixon, *Number of Instagram Users Worldwide from 2020 to 2025 (in Billions)*, Statista (Feb. 15, 2023), <https://www.statista.com/statistics/183585/instagram-number-of-global-users/>.

¹⁷² *Introducing Instagram Reels*, Instagram (Aug. 5, 2020), <https://about.instagram.com/blog/announcements/introducing-instagram-reels-announcement>.

¹⁷³ Katherine Schaeffer, *7 Facts About Americans and Instagram*, Pew Rsch. Ctr. (Oct. 7, 2021), <https://www.pewresearch.org/fact-tank/2021/10/07/7-facts-about-americans-and-instagram/>.

3. Facebook and Instagram Design and Market Their Platforms to Appeal to a Youth Audience

151. Facebook and Instagram have expended significant effort to attract youth, including teens and preteens, to their platforms, including designing features that appeal to them. They do this to maximize the revenue generated from relationships with advertisers and also because they view teenagers as a way to attract other potential users, such as by using teenagers to recruit parents who want to participate in their children's lives, as well as younger siblings who look to older siblings as models for which social media platforms to use and how to use them.¹⁷⁴

152. Facebook and Instagram explicitly target teenagers. An internal Instagram marketing plan reveals that it knows “[i]f we lose the teen foothold in the U.S. we lose the pipeline” for growth.¹⁷⁵ To ensure that did not happen, Instagram devoted almost all of its \$390 million annual marketing budget for 2018 to target teenagers.¹⁷⁶

153. Facebook also views preteens or “tweens” as a “valuable but untapped audience,” even contemplating “exploring playdates as a growth lever.”¹⁷⁷ Facebook formed a team to study preteens, endeavored to create more products designed for them, and commissioned strategy papers regarding the “business opportunities” created.¹⁷⁸

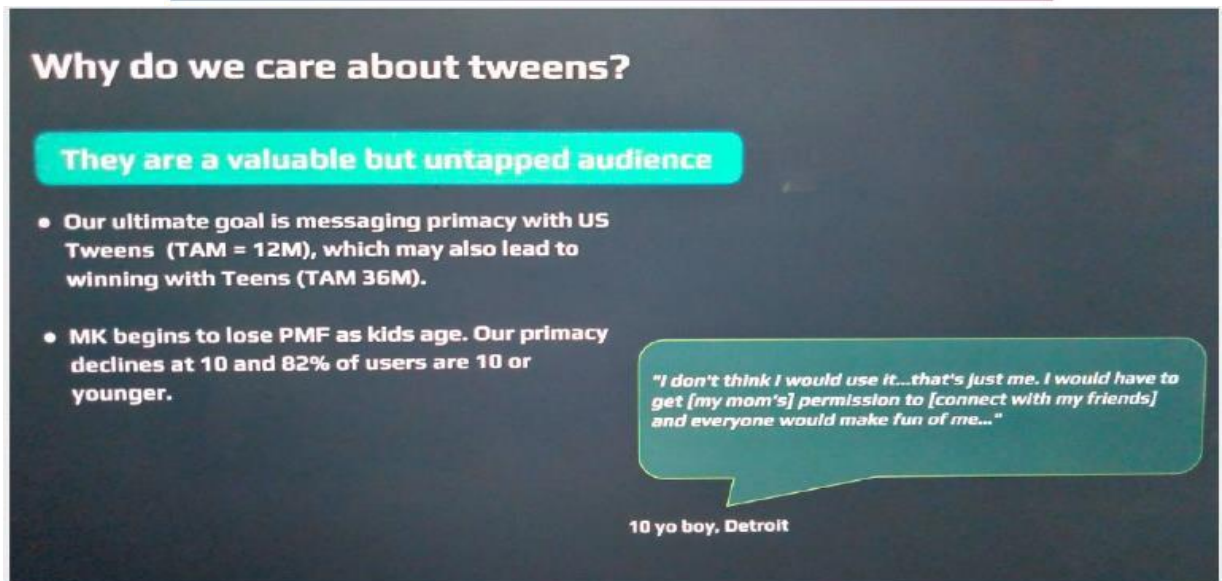
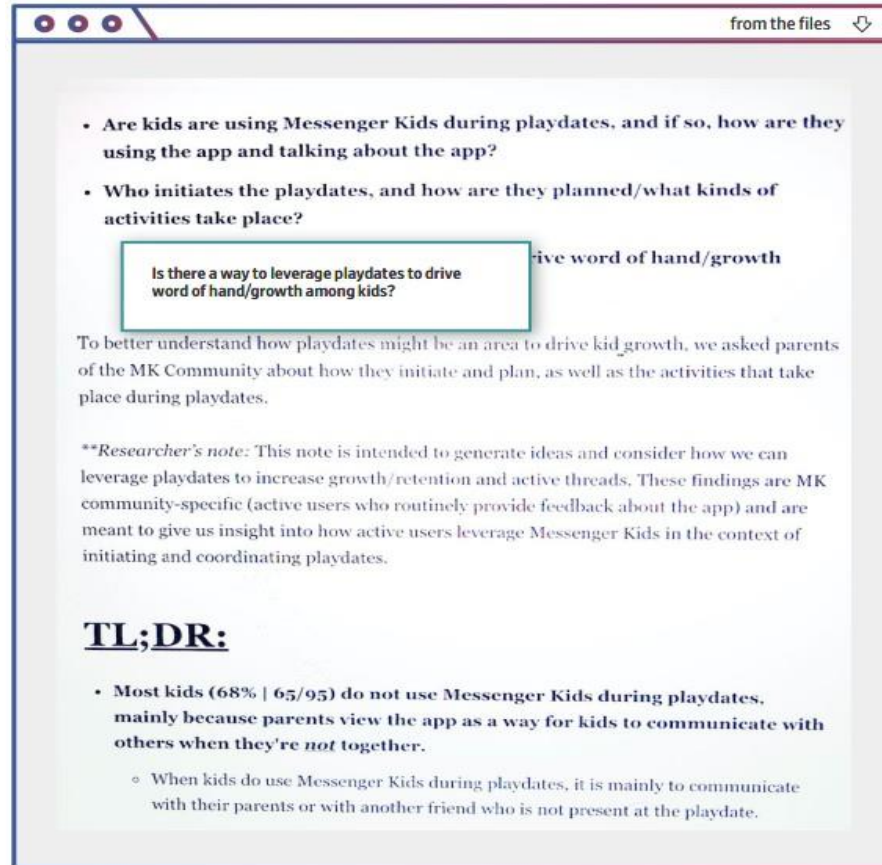
¹⁷⁴ Sheera Frenkel et al., *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y. Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show; It has investigated how to engage young users in response to competition from Snapchat, TikTok; ‘Exploring playdates as a growth lever,’* Wall St. J. (Sept. 28, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>.

¹⁷⁸ *Id.*



154. For these reasons, Facebook and Instagram are designed to be used by children and are actively marketed to children throughout their markets in the United States. Facebook and Instagram both advertise to children through their own efforts, as well as through advertisers that create and target advertisements to children. Internal company documents establish that Facebook

1 spends hundreds of millions of dollars researching, analyzing, and marketing to children to find
 2 ways to make its platforms more appealing to these age groups and to maximize the time they
 3 spend on its platforms as these age groups are seen as essential to Facebook’s long-term
 4 profitability and market dominance.¹⁷⁹ For instance, after Instagram’s founders left in
 5 September 2018, “Facebook went all out to turn Instagram into a main attraction for young
 6 audiences” and “began concentrating on the ‘teen time spent’ data point” in order to “drive up the
 7 amount of time that teenagers were on the app with features including Instagram Live, a
 8 broadcasting tool, and Instagram TV, where people upload videos that run as long as an hour.”¹⁸⁰

9 155. Similarly, Instagram’s popularity among young people is the result of its deliberate
 10 efforts to target children, which in turn is driven by the desire of advertisers and marketers to target
 11 children on the Facebook and Instagram platforms. In fact, Facebook’s acquisition of Instagram
 12 was primarily motivated by its desire to make up for declines in the use of Facebook by children
 13 and its view of Instagram as central to its ability to attract and retain young audiences. A 2018
 14 internal Facebook marketing report is indicative of this, lamenting the loss of teenage users to
 15 competitors’ platforms as “an ‘existential threat.’”¹⁸¹ In contrast, a Facebook presentation from
 16 2019 indicated that “‘Instagram is well positioned to resonate and win with young people,’” and
 17 “‘[t]here is a path to growth if Instagram can continue their trajectory.’”¹⁸²

18 156. With respect to preteens, Facebook’s policy is that they cannot register an account
 19 on either Facebook or Instagram, but it knowingly lacks effective age-verification protocols. Since
 20

21 ¹⁷⁹ *Id.*

22 ¹⁸⁰ Sheera Frenkel et al., *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*,
 23 N.Y. Times (Oct. 26, 2021), [https://www.nytimes.com/2021/10/16/technology/instagram-](https://www.nytimes.com/2021/10/16/technology/instagram-teens.html)
 24 [teens.html](https://www.nytimes.com/2021/10/16/technology/instagram-teens.html).

25 ¹⁸¹ *Id.*

26 ¹⁸² Georgia Wells et al., *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents*
 27 *Show; Its own in-depth research shows a significant teen mental-health issue that Facebook plays*
 28 *down in public*, Wall St. J. (Sept. 14, 2021), [https://www.wsj.com/articles/facebook-knows-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739)
[instagram-is-toxic-for-teen-girls-company-documents-show-11631620739](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739).

1 at least 2011, Facebook has known that its age-verification protocols are largely inadequate.¹⁸³ In
 2 2021, Adam Mosseri, the executive in charge of Instagram, acknowledged users under 13 can still
 3 “lie about [their] age now” to register an account.¹⁸⁴

4 157. Facebook has yet to implement protocols to verify a user’s age, presumably because
 5 it has strong business incentives not to do so or to laxly enforce its policy. Facebook also has
 6 agreements with cell phone manufacturers and/or providers and/or retailers, who often preinstall
 7 its platforms on mobile devices prior to sale without regard to the age of the intended user of each
 8 such device. That is, even though Facebook is prohibited from providing its platforms to users
 9 under the age of 13, Facebook actively promotes and provides underage users access to its
 10 platforms by encouraging and allowing cell phone manufacturers to preinstall the platforms on
 11 mobile devices indiscriminately. Consequently, in a recent Pew Research study, approximately
 12 11% of United States parents of children between the ages of 9 and 11 said their children used
 13 Instagram in 2020.¹⁸⁵

14 158. Facebook’s efforts to attract young users have been successful. In a recent study,
 15 62% of children aged 13 to 17 reported they have used Instagram’s app, and 32% of children aged
 16 13 to 17 reported they have used Facebook’s app or website.¹⁸⁶

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 21 ¹⁸³ Austin Carr, *Facebook Booting “20,000” Underage Users Per Day: Reaction to Growing Privacy Concerns?*, Fast Co. (Mar. 22, 2011), <https://www.fastcompany.com/1741875/facebook-booting-20000-underage-users-day-reaction-growing-privacy-concerns>.

22
 23 ¹⁸⁴ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show; It has investigated how to engage young users in response to competition from Snapchat, TikTok; ‘Exploring playdates as a growth lever,’* Wall St. J. (Sept. 28, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>.

24
 25 ¹⁸⁵ Brooke Auxier et al., *Parenting Children in the Age of Screens*, Pew Rsch. Ctr. (July 28, 2020), <https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/>.

26
 27 ¹⁸⁶ Heather Kelly, *Teens have fled Facebook but are loyal to YouTube, poll shows*, Wash. Post (Aug. 10, 2022), <https://www.washingtonpost.com/technology/2022/08/10/teens-social-pew/>.

4. Facebook and Instagram Intentionally Design Exploitative Features Aimed at Keeping Users on the Platforms for as Long as Possible

159. The Facebook platforms are designed to maximize user engagement, using features that exploit the natural human desire for social interaction and the neurophysiology of the brain's reward systems to keep users endlessly scrolling, posting, "liking," commenting, and counting the number of "likes" and comments to their own posts. The developing brains of children are particularly vulnerable to such exploitation.

160. One of the ways in which Facebook and Instagram employ IVRs is through its push notifications and emails, which encourage habitual use and are designed to prompt users to open and be exposed to content selected to maximize the use of Facebook's platforms and the ads run on them. In particular, Facebook and Instagram space out notifications of likes and comments into multiple bursts rather than notifying users in real time so as to create dopamine gaps that leave users craving in anticipation for more. In this regard, Facebook's push notifications and emails are specifically designed to manipulate users into reengaging with the Facebook platforms to increase user engagement regardless of a user's health or well-being.

161. Facebook also exploits IVRs to manipulate users with one of its most defining features: the "Like" button. Facebook knows "Likes" are a source of social comparison harm for many users as detailed below. Several Facebook employees involved in creating the Like button have since left Facebook and have spoken publicly about the manipulative nature of the Facebook platforms and the harm they cause users.¹⁸⁷

162. Additionally, Facebook designed other features of its platforms on principles of IVRs, such as posts, comments, tagging, and the "pull to refresh" feature (which is similar to the way that slot machines work).

163. Other design decisions were motivated by reciprocity, such as the use of visual cues to reflect that someone is currently writing a message (a feature designed to keep a user on the

¹⁸⁷ See, e.g., Paul Lewis, *'Our minds can be hijacked': the tech insiders who fear a smartphone dystopia*, Guardian (Oct. 6, 2017), <https://www.theguardian.com/technology/2017/oct/05/smartphone-addiction-silicon-valley-dystopia>.

platform until they receive the message) and alerting users when a recipient has read their message (which encourages the recipient to respond and return to the platform to check for a response).

164. Facebook and Instagram are designed to encourage users to post content and to like, comment, and interact with other users' posts. Each new post that appears on a user's feed functions as a dopamine-producing social interaction in the user's brain. Similarly, likes, comments, and other interactions with users' posts function as an even stronger dopamine-producing stimulus than does seeing new posts from other users. This in turn drives users to generate content they expect will generate many likes and comments. In this regard, Facebook has designed its platforms to function in concert as popular content posted by other users psychologically compels users to post similar content themselves, trapping users – especially youth – in endless cycles of “little dopamine loops.”¹⁸⁸

5. Facebook's and Instagram's Algorithms Are Manipulative and Harmful

165. Facebook and Instagram also employ advanced computer algorithms and AI to make the platforms as engaging and habit forming as possible for users. For example, Facebook and Instagram display curated content and employ recommendations that are customized to each user by using sophisticated algorithms. The proprietary services developed through such algorithms include Facebook's Feed (a newsfeed of stories and posts published on the platform, some of which are posted by connections and others that are suggested by Facebook's algorithms), People You May Know (algorithm-based suggestions of persons with common connections or background), Suggested for You, Groups You Should Join, and Discover (algorithm-based recommendations of groups). Such algorithm-based content and recommendations are pushed to each user in a steady stream as the user navigates the platform, as well as through notifications sent to the user's smartphone and email addresses when the user is disengaged with the platform.

¹⁸⁸ Allison Slater Tate, *Facebook whistleblower Frances Haugen says parents make 1 big mistake with social media*, Today (Feb. 7, 2022), <https://www.today.com/parents/teens/facebook-whistleblower-frances-haugen-rcna15256>.

1 166. These algorithms are not based exclusively on user requests or even user inputs.
 2 The algorithms combine information entered or posted by the user on the platform with the user's
 3 demographics and other data points collected and synthesized by Facebook, make assumptions
 4 about that user's interests and preferences, make predictions about what else might appeal to the
 5 user, and then make very specific recommendations of posts and pages to view and groups to visit
 6 and join based on rankings that will optimize Facebook's key performance indicators. In this
 7 regard, Facebook's design dictates the way content is presented, such as its ranking and
 8 prioritization.¹⁸⁹

9 167. Facebook's and Instagram's current use of algorithms in their platforms is driven
 10 and designed to maximize user engagement. Over time, Facebook and Instagram have gradually
 11 transitioned away from chronological ranking, which organized the interfaces according to when
 12 content was posted or sent, to prioritize Meaningful Social Interactions ("MSI"), which
 13 emphasizes users' connections and interactions such as likes and comments and gives greater
 14 significance to the interactions of connections that appeared to be the closest to users. Facebook
 15 thus developed and employed an "amplification algorithm" to execute engagement-based ranking,
 16 which considers a post's likes, shares, and comments, as well as a respective user's past
 17 interactions with similar content, and exhibits the post in the user's newsfeed if it otherwise meets
 18 certain benchmarks.

19 168. Facebook's algorithms covertly operate on the principle that intense reactions
 20 invariably compel attention. Because these algorithms measure reactions and contemporaneously
 21 immerse users in the most reactive content, these algorithms effectively work to steer users toward
 22 the most negative content because negative content routinely elicits passionate reactions.

23 169. Due to its focus on user engagement, Facebook's algorithms promote content that
 24 is objectionable and harmful to many users. As set forth in greater detail below, Facebook was
 25 well aware of the harmful content it was promoting but failed to change its algorithms because the

26
 27 ¹⁸⁹ See, e.g., Adam Mosseri, *Shedding More Light on How Instagram Works*, Instagram (June 8,
 28 2021), <https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works>.

1 inflammatory content its algorithms were feeding to users fueled their return to the platforms and
 2 led to more engagement, which in turn helped Facebook and Instagram sell more advertisements
 3 that generate most of their revenue. As such, Facebook’s algorithms promote harmful content
 4 because such content increases user engagement, which thereby increases its appeal to advertisers
 5 and increases its overall value and profitability.

6 170. Facebook’s and Instagram’s shift from chronological ranking to algorithm-driven
 7 content and recommendations has changed the platforms in ways that are profoundly dangerous
 8 and harmful to children, whose psychological susceptibility to habit-forming platforms put them
 9 at great risk of harm from the platforms’ exploitative and harmful features. In this regard, the
 10 algorithms used by these platforms exploit child users’ diminished decision-making capacity,
 11 impulse control, emotional maturity, and psychological resiliency caused by users’ incomplete
 12 brain development, and Facebook and Instagram specifically design their platforms with these
 13 vulnerabilities in mind.

14 **6. Facebook and Instagram “Feeds” Are Designed to Enable** 15 **Users to Scroll Endlessly**

16 171. Both Facebook and Instagram show each user a “feed” that is generated by an
 17 algorithm for that user, which consists of a series of photos and videos posted by accounts that the
 18 user follows, along with advertising and content specifically selected and promoted by the
 19 company.

20 172. These feeds are virtually bottomless lists of content that enable users to scroll
 21 endlessly without any natural end points that would otherwise encourage them to move on to other
 22 activities. In this regard, “[u]nlike a magazine, television show, or video game,” the Facebook and
 23 Instagram platforms only rarely prompt their users to take a break by using ““stopping cues.””¹⁹⁰
 24 The “bottomless scrolling” feature is designed to encourages users to use its platforms for
 25 unlimited periods of time.

26 ¹⁹⁰ See Zara Abrams, *How Can We Minimize Instagram’s Harmful Effects?; Psychologists’*
 27 *research has shown that Instagram use is associated both with beneficial and detrimental effects*
 28 *– depending on how it’s used*, Am. Psych. Ass’n (Dec. 2, 2021), <https://www.apa.org/monitor/2022/03/feature-minimize-instagram-effects>.

173. Facebook and Instagram also exert control over a user’s feed through certain ranking mechanisms, escalation loops, and promotion of advertising and content specifically selected and promoted based on, among other things, its ongoing planning, assessment, and prioritization of the types of information most likely to increase user engagement.

174. As described above, the algorithms generating a user’s feed encourage excessive use and promote harmful content, particularly where the algorithm is designed to prioritize the number of interactions rather than the quality of interactions.

175. In this regard, Facebook and Instagram use private information of their child users to “precisely target [them] with content and recommendations, assessing . . . what will provoke a reaction,” including encouragement of “destructive and dangerous behaviors,” which is how they “can push teens into darker and darker places.”¹⁹¹ As such, Facebook’s “amplification algorithms, things like engagement based ranking . . . can lead children . . . all the way from just something innocent like healthy recipes to anorexia promoting content over a very short period of time.”¹⁹² Facebook and Instagram thus specifically select and push this harmful content on their platforms, for which they are then paid, and do so both for direct profit and also to increase user engagement, resulting in additional profits down the road.

176. As one example, in 2021, Senators Richard Blumenthal, Marsha Blackburn, and Mike Lee tested and confirmed the fact that the Facebook and Instagram platforms’ recommendation-based feeds and features promote harmful content by opening test accounts purporting to be teenage girls. Senator Blumenthal stated: “‘Within an hour all of our recommendations promoted pro-anorexia and eating disorder content.’”¹⁹³ Likewise, Senator Lee

¹⁹¹ See *Facebook Whistleblower Frances Haugen Testifies on Children & Social Media Use: Full Senate Hearing Transcript* at 09:02, Rev (Oct. 5, 2021), <https://www.rev.com/blog/transcripts/facebook-whistleblower-frances-haugen-testifies-on-children-social-media-use-full-senate-hearing-transcript> (statement by Chairman Richard Blumenthal).

¹⁹² *Id.* at 37:34 (statement by Frances Haugen (“Haugen”)).

¹⁹³ Vanessa Romo, *4 Takeaways from Senators’ Grilling of Instagram’s CEO About Kids and Safety*, NPR (Dec. 8, 2021), <https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-brush-aside-his-promises-to-self-poli>.

1 found that an account for a fake 13-year-old girl was quickly “flooded with content about diets,
2 plastic surgery and other damaging material for an adolescent girl.”¹⁹⁴

3 177. Instagram features a feed of “Stories,” which are short-lived photo or video posts
4 that are accessible only for 24 hours. This feature encourages constant, repeated, and compulsive
5 use of Instagram so that users do not miss out on content before it disappears. As with other feeds,
6 the presentation of content in a user’s Stories is generated by an algorithm designed by Instagram
7 to maximize the amount of time a user spends on the app.

8 178. Instagram also features a feed called “Explore,” which displays content posted by
9 users not previously “followed.” The content in “Explore” is selected and presented by an
10 algorithm designed to maximize the amount of time a user spends on the app. As with other feeds,
11 the Explore feature may be scrolled endlessly; and its algorithm will continually generate new
12 recommendations, encouraging users to use the app for unlimited periods of time.

13 179. Instagram also features a feed called “Reels,” which presents short video posts by
14 users not previously followed. These videos play automatically, without input from the user,
15 encouraging the user to stay on the app for indefinite periods of time. As with other feeds, Reels
16 content is selected and presented by an algorithm designed to maximize the amount of time a user
17 spends on the app.

18 **7. For Years, Facebook and Instagram Have Been Aware that** 19 **Their Platforms Harm Children**

20 180. Social media platforms like Facebook – and Instagram in particular – can cause
21 serious harm to the mental and physical health of children. Moreover, this capacity for harm is by
22 design – what makes these platforms profitable is precisely what harms its young users.

23 181. In an internal slide presentation in 2019, Facebook’s own researchers studying
24 Instagram’s effects on children concluded: “We make body image issues worse for one in three
25 teen girls.”¹⁹⁵ This presentation was one of many documents leaked by former employee Haugen

26 ¹⁹⁴ *Id.*

27 ¹⁹⁵ Georgia Wells et al., *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents*
28 *Show; Its own in-depth research shows a significant teen mental-health issue that Facebook plays*

1 to journalists at *The Wall Street Journal* and federal regulators in 2021.¹⁹⁶ *The Wall Street*
 2 *Journal*'s reporting on the documents began in September 2021 and caused a national and
 3 international uproar.

4 182. Upon information and belief, at least as far back as 2019, Facebook initiated a
 5 Proactive Incident Response experiment, which began researching the effect of Facebook and
 6 Instagram on the mental health of today's children.¹⁹⁷ Facebook's own in-depth analyses show
 7 significant mental-health issues stemming from the use of Instagram among teenage girls, many
 8 of whom linked suicidal thoughts and eating disorders to their experiences on the app.¹⁹⁸ In this
 9 regard, the companies' own researchers have repeatedly found that Instagram is harmful for a
 10 sizable percentage of teens who use the platform.¹⁹⁹

11 183. In particular, the researchers found that "[s]ocial comparison," or peoples'
 12 assessment of their own value relative to that of others, is "worse on Instagram" for teens than
 13 on other social media platforms.²⁰⁰ One in five teens reported that Instagram make[s] "them feel

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 16 *down in public*, Wall St. J. (Sept. 14, 2021), [https://www.wsj.com/articles/facebook-knows-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739)
 17 [instagram-is-toxic-for-teen-girls-company-documents-show-11631620739](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739).

18 ¹⁹⁶ *The Wall Street Journal* and *Digital Wellbeing* published several of these documents in
 19 November 2021. See, e.g., Paul Marsden, *The 'Facebook Files' on Instagram harms – all leaked*
 20 *slides on a single page*, Digit. Wellbeing (Oct. 20, 2021), [https://digitalwellbeing.org/the-](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/)
 21 [facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/). Gizmodo also started
 publishing these documents in November 2021. See Dell Cameron et al., *Read the Facebook*
Papers for Yourself; Hundreds of internal documents formed the basis of dozen of news stories.
They have not been made public. Until now, Gizmodo (Feb. 14, 2023),
<https://gizmodo.com/facebook-papers-how-to-read-1848702919>.

22 ¹⁹⁷ See *Facebook Whistleblower Testifies on Protecting Children Online*, C-SPAN (Oct. 5, 2021),
 23 [https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-](https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook)
[facebook](https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook).

24 ¹⁹⁸ See Georgia Wells et al., *Facebook Knows Instagram Is Toxic for Teen Girls, Company*
 25 *Documents Show*, Wall St. J. (Sept. 14, 2021), [https://www.wsj.com/articles/facebook-knows-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739)
[instagram-is-toxic-for-teen-girls-company-documents-show-11631620739](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739).

26 ¹⁹⁹ *Id.*

27 ²⁰⁰ *Id.*

worse about themselves.”²⁰¹ Roughly two in five teen users reported feeling ““unattractive,”” while one in ten teen users reporting suicidal thoughts traced them to Instagram.²⁰² Teens “consistently” and without prompting blamed Instagram ““for increases in the rate of anxiety and depression.””²⁰³ Although teenagers identify Instagram as a source of psychological harm, they often lack the self-control to use Instagram less. Also, according to their own researchers, young users are not capable of controlling their Instagram use to protect their own health.²⁰⁴ Such users ““often feel “addicted” and know that what they’re seeing is bad for their mental health but feel unable to stop themselves.””²⁰⁵

184. Similarly, in a March 2020 presentation posted to Facebook’s internal message board, researchers found that ““[t]hirty-two percent of teen girls said that when they felt bad about their bodies, Instagram made them feel worse.””²⁰⁶ Sixty-six percent of teen girls and forty-four percent of teen boys have experienced negative social comparison harms on Instagram.²⁰⁷ Further, approximately 13% of teen girl Instagram users say the platform makes thoughts of suicide and self-harm worse, and 17% of teen girl Instagram users say the platform makes “[e]ating issues”

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Id.*

²⁰⁵ *Id.*

²⁰⁶ *Id.*; see also *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in the U.S.*, Wall St. J. (Sept. 29, 2021), <https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf>; *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019), <https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf> at 14; Paul Marsden, *The ‘Facebook Files’ on Instagram harms – all leaked slides on a single page* at slide 14, Digit. Wellbeing (Oct. 20, 2021), <https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page> (hard life moment – mental health deep dive).

²⁰⁷ *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in the U.S.* at slide 9, Wall St. J. (Sept. 29, 2021), <https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf>.

worse.²⁰⁸ Internal researchers also acknowledged that “[m]ental health outcomes” related to the use of Instagram “can be severe,” including: (i) “Body Dissatisfaction”; (ii) “Body Dysmorphia”; (iii) “Eating Disorders”; (iv) “Loneliness”; and (v) “Depression.”²⁰⁹

185. Not only is Facebook aware of the harmful nature of the Facebook and Instagram platforms, the leaked documents reveal that Facebook is aware of the specific design features that lead to excessive use and harm to children. For instance, Facebook and Instagram know that Instagram’s Explore, Feed, and Stories features contribute to social comparison harms “in different ways.”²¹⁰ Moreover, specific “[a]spects of Instagram exacerbate each other to create a perfect storm” of harm to users, and the “[s]ocial [c]omparison [s]weet [s]pot” – a place of considerable harm to users, particularly teenagers and teen girls – lies at the center of Meta’s model and platforms’ features.²¹¹ Internal researchers wrote that “social comparison and perfectionism are nothing new, but young people are dealing with this on an unprecedented scale” and “constant comparison on Instagram is contributing to higher levels of anxiety and depression.”²¹²

H. YouTube’s Social Media Platform Has Substantially Contributed to the Youth Mental Health Crisis

186. YouTube is a platform where users can post, share, view, and comment on videos related to a vast range of topics. The platform became available publicly in December 2005 and was acquired by Google in 2006.

²⁰⁸ *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019), <https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf>; Paul Marsden, *The ‘Facebook Files’ on Instagram harms – all leaked slides on a single page* at slide 14, Digit. Wellbeing (Oct. 20, 2021), <https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page>.

²⁰⁹ *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in the U.S.* at slide 34, Wall St. J. (Sept. 29, 2021), <https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf>.

²¹⁰ *Id.* at 31.

²¹¹ *Id.* at 33.

²¹² *See The Facebook Files, Part 2: ‘We Make Body Image Issues Worse’*, Wall St. J. (Sept. 14, 2021), <https://www.wsj.com/podcasts/the-journal/the-facebook-files-part-2-we-make-body-image-issues-worse/c2c4d7ba-f261-4343-8d18-d4de177cf973>.

187. YouTube reports that it has over 2 billion monthly logged-in users.²¹³ Even more people use YouTube each month because consumers do not have to register an account to view a video on YouTube. As a result, anyone can view most content on YouTube regardless of age.

188. Users, whether logged in or not, watch *billions of hours of videos every day*.²¹⁴

189. Users with accounts can post their own videos, comment on others, and, since 2010, express their approval of videos through “likes.”²¹⁵

190. Beginning in 2008 and through today, YouTube has recommended videos to users.²¹⁶ Early on, the videos YouTube recommended to users were the most popular videos across the platform.²¹⁷ YouTube admits “[n]ot a lot of people watched those videos,” at least not based on its recommendation.²¹⁸

191. Since then, YouTube has designed and refined its recommendation system using machine-learning algorithms that today take into account a user’s “likes,” time spent watching a video, and other behaviors to tailor its recommendations to each user.²¹⁹

192. YouTube automatically plays those recommendations for a user after they finish watching a video. This feature, known as “autoplay,” was implemented in 2015. YouTube turns

²¹³ *YouTube for Press*, YouTube, <https://blog.youtube/press/> (last visited Feb. 27, 2023).

²¹⁴ *Id.*

²¹⁵ Josh Lowensohn, *YouTube’s big redesign goes live to everyone*, CNET (Mar. 31, 2010), <https://www.cnet.com/culture/youtubes-big-redesign-goes-live-to-everyone/>.

²¹⁶ Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ *Id.*

1 the feature on by default, which means videos automatically and continuously play for users unless
2 they turn it off.²²⁰

3 193. YouTube purports to disable by default its autoplay feature for users aged 13 to
4 17.²²¹ However, as mentioned above, YouTube does not require users to log in or even have an
5 account to watch videos. For them or anyone who does not self-report an age between 13 and 17,
6 YouTube defaults to automatically playing the videos its algorithm recommends to the user.

7 **1. YouTube Designs and Markets Its Platform to Appeal to a** 8 **Youth Audience**

9 194. The primary way YouTube makes money is through advertising. It made
10 \$19 billion in advertising revenue in 2021 alone.²²² Consequently, Google has designed YouTube
11 to maximize user engagement, predominantly through the amount of time users spend watching
12 videos.

13 195. “In 2012, YouTube concluded that the more people watched, the more ads it could
14 run So YouTube . . . set a company-wide objective to reach one billion hours of viewing a
15 day”²²³

16 196. “[T]he best way to keep eyes on the site,” YouTube realized, was “recommending
17 videos, alongside a clip or after one was finished.”²²⁴ That is what led to the development of its
18 recommendation algorithm and autoplay feature described above.

19 ²²⁰ *Autoplay videos*, YouTube Help, <https://support.google.com/youtube/answer/6327615?hl=en#:~:text=For%20users%20aged%2013%2D17,turned%20off%20Autoplay%20for%20you>
20 (last visited Feb. 27, 2023).

21 ²²¹ *Id.*

22 ²²² Alphabet Inc.’s 2021 Annual Report on SEC Form 10-K at 60 (Feb 1, 2022),
23 <https://www.sec.gov/ix?doc=/Archives/edgar/data/1652044/000165204422000019/goog-20211231.htm>.

24 ²²³ Mark Bergen, *YouTube Executive Ignores Warnings, Letting Toxic Videos Run Rampant*,
25 Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant?leadSource=uverify%20wall>.

26 ²²⁴ Mark Bergen, *YouTube Executive Ignores Warnings, Letting Toxic Videos Run Rampant*,
27 Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant?leadSource=uverify%20wall>.
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1 197. YouTube has long known youth use its platforms in greater proportion than older
2 demographics.

3 198. However, YouTube has not implemented even rudimentary protocols to verify the
4 age of users. Anyone can watch a video on YouTube without registering an account or reporting
5 their age.

6 199. Instead, YouTube leveraged its popularity among youth to increase its revenue
7 from advertisements by marketing its platform to popular brands of children's products. For
8 example, Google pitched Mattel, the maker of Barbie and other popular children's toys, by telling
9 its executives: "YouTube is today's leader in reaching children age 6-11 against top TV
10 channels."²²⁵ When presenting to Hasbro, the maker of Play-Doh, My Little Pony, and other
11 children's toys, Google touted: "YouTube is unanimously voted as the favorite website of kids 2-
12 12" and "93% of tweens visit YouTube to watch videos."²²⁶ In a different presentation to Hasbro,
13 YouTube was referred to as "[t]he new 'Saturday Morning Cartoons'" and claimed YouTube was
14 the "#1 website regularly visited by kids" and "the #1 source where children discover new toys +
15 games."²²⁷

16 200. In addition to turning a blind eye toward underage users of its platform, YouTube
17 developed and marketed a version of YouTube specifically for children under the age of 13.

18 201. YouTube's efforts to attract young users have been successful. A vast majority,
19 95%, of children aged 13 to 17 have used YouTube.²²⁸

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24 ²²⁵ Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief,
25 Exhibits A-C, *FTC v. Google LLC* et al., No. 1-19-cv-02642-BAH, ECF 1-1 (D.D.C. Sept. 4,
2019).

26 ²²⁶ *Id.*

27 ²²⁷ *Id.*

28 ²²⁸ *Id.*

1 **2. YouTube Intentionally Designs Features to Keep Its Users on**
 2 **Its Platform for as Long as Possible**

3 202. Google employs design features and complex algorithms to create a never-ending
 4 stream of videos intended to grip users' attention.

5 203. Like the other defendants' social media platforms, Google developed features that
 6 exploit psychological phenomena such as IVRs to maximize the time users spend on YouTube.

7 204. YouTube uses design elements that operate on principles of IVRs to drive both
 8 YouTube content creators and YouTube viewers into habitual, excessive use. Google designed
 9 YouTube to allow users to like, comment, and share videos and to subscribe to content creators'
 10 channels. These features serve as rewards for users who create and upload videos to YouTube.
 11 As described above, receiving a like indicates others' approval and activates the reward region of
 12 the brain.²²⁹ The use of likes therefore encourages users to use YouTube over and over, seeking
 13 future pleasurable experiences.

14 205. YouTube also uses IVRs to encourage users to view others' content. One of the
 15 ways Google employs IVRs into YouTube's design is through subscriber push notifications and
 16 emails, which are designed to prompt users to watch YouTube content and encourages excessive
 17 use of the platform. When a user "subscribe[s]" to another user's channel, the subscriber receives
 18 notifications every time that user uploads new content, prompting the subscriber to open YouTube
 19 and watch the video.²³⁰

20 206. One of YouTube's defining features is its panel of recommended videos. YouTube
 21 recommends videos to users on both the YouTube home page and on every individual video page
 22 in an "Up Next" panel.²³¹ This list automatically populates next to the video a user is currently
 23

24 ²²⁹ See, e.g., Lauren E. Sherman et al., *The Power of the Like in Adolescence: Effects of Peer*
 25 *Influence on Neural and Behavioral Responses to Social Media*, 27(7) Psych. Sci. 1027-35
 (July 2016), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/>.

26 ²³⁰ *Manage YouTube Notifications*, YouTube, <https://support.google.com/youtube/answer/3382248?hl=en&co=GENIE.Platform%3DDesktop> (last visited Feb. 27, 2023).

27 ²³¹ *Recommended Videos*, YouTube, [https://www.youtube.com/howyoutubeworks/product-](https://www.youtube.com/howyoutubeworks/product-features/recommendations/)
 28 [features/recommendations/](https://www.youtube.com/howyoutubeworks/product-features/recommendations/) (last visited Feb. 27, 2023).

1 watching. This recommended video list is a never-ending feed of videos intended to keep users
 2 on the app watching videos without having to affirmatively click or search for other videos. This
 3 constant video stream, comprised of videos recommended by YouTube's algorithms, is the
 4 primary way Google increases the time users spend on YouTube.

5 **3. YouTube's Algorithms Are Manipulative and Harmful,** 6 **Especially to a Youth Audience**

7 207. Google uses complex algorithms throughout YouTube to recommend videos to
 8 users. These algorithms select videos that populate the YouTube homepage, rank results in user
 9 searches, and suggest videos for viewers to watch next. These algorithms are manipulative
 10 because they are designed to increase the amount of time users spend on YouTube.

11 208. Google began building the YouTube recommendation system in 2008.²³² When
 12 Google initially developed its recommendation algorithms, the end goal was to maximize the
 13 amount of time users spend watching YouTube videos. A YouTube spokesperson admitted as
 14 much, saying YouTube's recommendation system was initially set up to "optimize" the amount of
 15 time users watch videos.²³³

16 209. Former YouTube engineer Guillaume Chaslot ("Chaslot") has stated that when he
 17 worked for YouTube designing its recommendation algorithm, the priority was to keep viewers on
 18 the site for as long as possible to maximize "watch time."²³⁴ Chaslot further stated: "Increasing
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23 ²³² Cristos Goodrow, *On YouTube's recommendation system*, YouTube (Sept. 15, 2021),
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

24 ²³³ Ben Popken, *As algorithms take over, YouTube's recommendations highlight a human*
 25 *problem*, NBC (Apr. 19, 2018), <https://www.nbcnews.com/tech/social-media/algorithms-take-over-youtube-s-recommendations-highlight-human-problem-n867596>.

26 ²³⁴ William Turton, *How YouTube's algorithm prioritizes conspiracy theories*, Vice (Mar. 5,
 27 2018), <https://www.vice.com/en/article/d3w9ja/how-youtubes-algorithm-prioritizes-conspiracy-theories>.
 28

1 users' watch time is good for YouTube's business model'" because the more people watch videos,
2 the more ads they see, and YouTube's advertising revenue increases.²³⁵

3 210. Early on, one of the primary metrics behind YouTube's recommendation algorithm
4 was clicks. As YouTube describes: "Clicking on a video provides a strong indication that you will
5 also find it satisfying."²³⁶ However, as YouTube learned, clicking on a video does not mean a user
6 actually watched it. Thus, in 2012, YouTube also started tracking watch time – the amount of time
7 a user spends watching a video.²³⁷ YouTube made this switch to keep people watching for as long
8 as possible.²³⁸ In YouTube's own words, this switch was successful. "These changes have so far
9 proved very positive – primarily less clicking, more watching. We saw the amount of time viewers
10 spend watching videos across the site increase immediately"²³⁹ In 2016, YouTube started
11 measuring "valued watchtime" via user surveys to ensure that viewers are satisfied with their time
12 spent watching videos on YouTube.²⁴⁰ All of these changes to YouTube's algorithms were made
13 to ensure that users spent more time watching videos and ads.

14 211. YouTube's current recommendation algorithm is based on deep-learning neural
15 networks that retune its recommendations based on the data fed into it.²⁴¹ While this algorithm is
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18 ²³⁵ Jesselyn Cook & Sebastian Murdock, *YouTube is a Pedophile's Paradise*, Huffington Post
(Mar. 21, 2020), https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db.

20 ²³⁶ Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021),
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

21 ²³⁷ *Id.*

22 ²³⁸ Dave Davies, *How YouTube became one of the planet's most influential media businesses*,
23 NPR (Sept. 8, 2022), <https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-of-the-planets-most-influential-media-businesses>.

24 ²³⁹ Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012),
25 <https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/>.

26 ²⁴⁰ Cristos Goodrow, *On YouTube's recommendation system*, YouTube (Sept. 15, 2021),
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

27 ²⁴¹ Alexis C. Madrigal, *How YouTube's Algorithm Really Works*, Atl. (Nov. 8, 2018),
28 <https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/>

1 incredibly complex, its process can be broken down into two general steps. First, the algorithm
 2 compiles a shortlist of several hundred videos by finding videos that match the topic and other
 3 features of the video a user is currently watching.²⁴² Then the algorithm ranks the list according
 4 to the user's preferences, which the algorithm learns by tracking a user's clicks, likes, and other
 5 interactions.²⁴³ In short, the algorithms track and measure a user's previous viewing habits and
 6 then finds and recommends other videos the algorithm thinks will hold the consumer's attention.

7 212. YouTube's recommendation system is "constantly evolving, learning every day
 8 from over 80 billion pieces of information."²⁴⁴ Some of the information on which the
 9 recommendation algorithm relies to deliver recommended videos to users includes users' watch
 10 and search history, channel subscriptions, clicks, watch time, survey responses, shares, likes,
 11 dislikes, users' location (country), and time of day.²⁴⁵

12 213. The recommendation algorithm can determine which "signals" or factors are more
 13 important to individual users.²⁴⁶ For example, if a user shares every video they watch, including
 14 videos the user gives a low rating, the algorithm learns not to heavily factor the user's shares when
 15 recommending content.²⁴⁷ Thus, the recommendation algorithm "develops dynamically" to an
 16

17 575212/; Paul Covington et al., *Deep Neural Networks for YouTube Recommendations*, Google
 18 (2016), <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf>.

19 ²⁴² Karen Hao, *YouTube is experimenting with ways to make its algorithm even more addictive*,
 20 MIT Tech. Rev. (Sept. 27, 2019), <https://www.technologyreview.com/2019/09/27/132829/youtube-algorithm-gets-more-addictive/>; Paul Covington et al., *Deep Neural Networks for YouTube Recommendations*, Google (2016), <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf>.
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22 ²⁴³ *Id.*

23 ²⁴⁴ Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021),
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

24 ²⁴⁵ *Recommended Videos; Signals Used to Recommend Content*, YouTube,
 25 <https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content> (last visited Feb. 27, 2023).

26 ²⁴⁶ *Id.*

27 ²⁴⁷ *Id.*

1 individual user's viewing habits and makes highly specific recommendations to keep individual
2 users watching videos.²⁴⁸

3 214. In addition to the algorithm's self-learning, Google engineers consistently update
4 YouTube's recommendation and ranking algorithms, making several updates every month,
5 according to YouTube Chief Product Officer Neal Mohan ("Mohan").²⁴⁹ The end goal is to
6 increase the amount of time users spend watching content on YouTube.

7 215. Because Google has designed and refined its algorithms to be manipulative, these
8 algorithms are incredibly successful at getting users to view content based on the algorithm's
9 recommendation. Mohan stated in 2018 that YouTube's AI-driven recommendations are
10 responsible for 70% of the time users spend on YouTube.²⁵⁰ In other words, 70% of all YouTube
11 content that users watch was recommended to users by YouTube's algorithms as opposed to users
12 purposely searching for and identifying the content they watch.

13 216. Mohan also stated that recommendations keep mobile device users watching
14 YouTube for more than 60 minutes at a time on average.²⁵¹

15 217. Given that people watch more than one billion hours of YouTube videos daily,²⁵²
16 YouTube's recommendation algorithms are responsible for hundreds of millions of hours that
17 users spend watching videos on YouTube.

21 ²⁴⁸ *Id.*

22 ²⁴⁹ Nilay Patel, *YouTube Chief Product Officer Neal Mohan on The Algorithm, Monetization, and*
23 *the Future for Creators*, The Verge (Aug. 3, 2021), <https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview>.

24 ²⁵⁰ Joan E. Solsman, *YouTube's AI is the puppet master over most of what you watch*, CNET (Jan.
25 20, 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

26 ²⁵¹ *Id.*

27 ²⁵² Shira Ovide, *The YouTube Rabbit Hole is Nuanced*, N.Y. Times (Apr. 21, 2022),
<https://www.nytimes.com/2022/04/21/technology/youtube-rabbit-hole.html>.

4. YouTube's Conduct Has Harmed Youth Mental Health

218. YouTube's conduct harms youth mental health through its features designed to maximize the amount of time users spend watching videos and by recommending content to youth through its algorithms.

219. YouTube's algorithms push its young users down rabbit holes where they are likely to encounter content that is violent, is sexual, or encourages self-harm, among other types of harmful content.

220. Research by the Tech Transparency Project ("TTP") shows that YouTube Kids fed children content involving drug culture, guns, and beauty and diet tips that could lead to harmful body image issues.²⁵³ Among the videos TTP found were step-by-step instructions on how to conceal a gun, guides on how to bleach one's face at home, and workout videos emphasizing the importance of burning calories and telling children to "[w]iggle your jiggle."²⁵⁴ This research shows that YouTube Kids not only lets inappropriate content slip through its algorithmic filters but actively directed the content to children through its recommendation engine.

221. Similar examples abound. Amanda Kloer, a campaign director with the child safety group ParentsTogether, spent an hour on her child's YouTube Kids profile and found videos "encouraging kids how to make their shirts sexier, a video in which a little boy pranks a girl over her weight, and a video in which an animated dog pulls objects out of an unconscious animated hippo's butt."²⁵⁵ Another parent recounted that YouTube Kids' autoplay function led her six-year-old daughter to an animated video that encouraged suicide.²⁵⁶

²⁵³ Alex Hern, *YouTube Kids shows videos promoting drug culture and firearms to toddlers*, Guardian (May 5, 2022), <https://www.theguardian.com/technology/2022/may/05/youtube-kids-shows-videos-promoting-drug-culture-firearms-toddlers>.

²⁵⁴ *Guns, Drugs, and Skin Bleaching: YouTube Kids Poses Risks to Children*, Tech Transparency Project (May 5, 2022), <https://www.techtransparencyproject.org/articles/guns-drugs-and-skin-bleaching-youtube-kids-still-poses-risks-children>.

²⁵⁵ Rebecca Heilweil, *YouTube's kids app has a rabbit hole problem*, Vox (May 12, 2021), <https://www.vox.com/recode/22412232/youtube-kids-autoplay>.

²⁵⁶ *Id.*

222. Other youth are fed content by YouTube’s algorithms that encourages self-harm. As reported by PBS Newshour, a middle schooler named Olivia compulsively watched YouTube videos every day after she came home from school.²⁵⁷ Over time she became depressed and started searching for videos on how to commit suicide. Similar videos then gave her the idea of overdosing. Weeks later she was in the hospital after “downing a bottle of Tylenol.”²⁵⁸ Ultimately, she was admitted into rehab for digital addiction because of her compulsive YouTube watching.²⁵⁹

223. According to the Pew Research Center, 46% of parents say their child has encountered inappropriate videos on YouTube.²⁶⁰ Children are not encountering these videos on their own volition. Rather, they are being fed harmful and inappropriate videos through YouTube’s algorithms. Again, YouTube’s AI-driven recommendations are responsible for 70% of the time users spend on YouTube.²⁶¹

224. Other reports have also found that YouTube’s recommendation algorithm suggests a wide array of harmful content, including videos that feature misinformation, violence, and hate speech, along with other content that violates YouTube’s policies.²⁶² A 2021 crowdsourced investigation from the Mozilla Foundation involving 37,000 YouTube users revealed that 71% of all reported negative user experiences came from videos recommended by YouTube to users.²⁶³

²⁵⁷ Lesley McClurg, *After compulsively watching YouTube, teenage girl lands in rehab for ‘digital addiction’*, PBS (May 16, 2017), <https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction>.

²⁵⁸ *Id.*

²⁵⁹ *Id.*

²⁶⁰ Brooke Auxier et al., *Parenting Children in The Age of Screens*, Pew Rsch. Ctr. (July 28, 2020), <https://www.pewresearch.org/internet/2020/07/28/parental-views-about-youtube/>.

²⁶¹ Joan E. Solsman, *YouTube’s AI is the puppet master over most of what you watch*, CNET (Jan. 20, 2018), <https://www.cnet.com/tech/services-and-software/youtube-cs-2018-neal-mohan/>.

²⁶² Brandy Zadrozny, *YouTube’s recommendations still push harmful videos, crowdsourced study finds*, NBC News (July 17, 2021), <https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355>.

²⁶³ *Id.*

1 Additionally, users were 40% more likely to report a negative experience with a video
2 recommended by YouTube's algorithm than with a video for which they had searched.²⁶⁴

3 225. The inappropriate and disturbing content to which YouTube's algorithms expose
4 children have adverse effects on mental health. Mental health experts have warned that YouTube
5 is a growing source of anxiety and inappropriate sexual behavior among children under the age of
6 13.²⁶⁵

7 226. Further the harmful content to which YouTube's algorithms expose children harm
8 brain development. "Children who repeatedly experience stressful and/or fearful emotions may
9 under-develop parts of their brain's prefrontal cortex and frontal lobe, the parts of the brain
10 responsible for executive functions, like making conscious choices and planning ahead," according
11 to Donna Volpitta, Ed.D., founder of The Center for Resilient Leadership.²⁶⁶

12 227. Even though much of the content YouTube's algorithms feed to youth is harmful,
13 it triggers chemical reactions that encourage youth to spend more time watching videos on
14 YouTube. According to Dr. Volpitta, watching "fear-inducing videos cause the brain to receive a
15 small amount of dopamine," which acts as a reward and creates a desire to do something over and
16 over.²⁶⁷ This dopaminergic response is in addition to the reward stimulus YouTube provides users
17 through IVRs.

18 228. Mental health professionals across the country have seen an increase in children
19 experiencing mental health issues because of YouTube. Natasha Daniels, a child psychotherapist
20 in Arizona, has said she has seen a rise in cases of children suffering from anxiety because of
21
22

23 ²⁶⁴ *Id.*

24 ²⁶⁵ Josephine Bila, *YouTube's dark side could be affecting your child's mental health*, CNBC
25 (Feb. 13, 2018), <https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html>.

26 ²⁶⁶ *Id.*

27 ²⁶⁷ *Id.*

1 videos they watched on YouTube.²⁶⁸ Because of their anxiety, these children “exhibit loss of
2 appetite, sleeplessness, crying fits and fear.”²⁶⁹

3 229. In addition to causing anxiety, watching YouTube is also associated with
4 insufficient sleep.²⁷⁰ In one study on the effect of app use and sleep, YouTube was the only app
5 consistently associated with negative sleep outcomes.²⁷¹ For every 15 minutes teens spent
6 watching YouTube, they had a 24% greater chance of getting fewer than seven hours of sleep.²⁷²
7 YouTube is particularly problematic on this front because YouTube’s recommendation and
8 autoplay feature make it “so easy to finish one video” and watch the next, said Dr. Alon Avidan,
9 director of the UCLA Sleep Disorders Center.²⁷³ In turn, insufficient sleep is associated with poor
10 health outcomes.²⁷⁴ Thus, YouTube exacerbates an array of youth mental health issues by
11 contributing to sleep deprivation.

12 230. Despite the vast evidence that YouTube’s design and algorithms harm millions of
13 youths, Google continues to manipulate them into staying on the platform and watching more and
14 more videos so it can increase its ad revenue.

18 ²⁶⁸ *Id.*

19 ²⁶⁹ *Id.*

20 ²⁷⁰ Meg Pillion et al., *What’s ‘app’-ning to adolescent sleep? Links between device, app use, and*
21 *sleep outcomes*, 100 *Sleep Med.* 174-82 (Dec. 2022), <https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub>.

22 ²⁷¹ *Id.*

23 ²⁷² *Id.*

24 ²⁷³ Cara Murez, *One App is Especially Bad for Teens’ Sleep*, U.S. News (Sept. 13, 2022),
25 <https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep>.

26 ²⁷⁴ Jessica C. Levenson et al., *The Association Between Social Media Use and Sleep Disturbance*
27 *Among Young Adults*, 85 *Preventive Med.* 36-41 (Apr. 2016), <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>.

I. Snapchat's Social Media Platform Has Substantially Contributed to the Youth Mental Health Crisis

231. Snapchat is a photo-sharing platform that allows users to form groups and share photos, known as “snaps,” that disappear after being viewed by the recipients. It was created in 2011 by Stanford University students Evan Spiegel and Bobby Murphy, who serve as Snap’s Chief Executive Officer (“CEO”) and Chief Technical Officer (“CTO”), respectively.²⁷⁵

232. Snapchat quickly evolved from a simple photo-sharing app as Snap made design changes and rapidly developed new features aimed at, and ultimately increasing Snapchat’s popularity among, teenage users.

233. Today, Snapchat is one of the largest social media platforms in the world. By its own estimates, Snapchat has 363 million daily users, including 100 million daily users in North America.²⁷⁶ Snapchat reaches 90% of people aged 13 to 24 in over 20 countries and reaches nearly half of all smartphone users in the United States.²⁷⁷

234. Snapchat initially became well known for its self-destructing content feature. In 2012, Snap added video-sharing capabilities, pushing the number of “snaps” to 50 million per day.²⁷⁸ A year later, Snap added the “Stories” function, which allows users to upload a rolling compilation of snaps that the user’s friends can view for 24 hours.²⁷⁹ The following year, Snap

²⁷⁵ Katie Benner, *How Snapchat is Shaping Social Media*, N.Y. Times (Nov. 30, 2016), <https://www.nytimes.com/2016/11/30/technology/how-snapchat-works.html>.

²⁷⁶ *October 2022 Investor Presentation* at 5, Snap Inc. (Oct. 20, 2022), <https://investor.snap.com/events-and-presentations/presentations/default.aspx>.

²⁷⁷ *Id.* at 6-7.

²⁷⁸ J.J. Colao, *Snapchat Adds Video, Now Seeing 50 million Photos A Day*, Forbes (Dec. 14, 2012), <https://www.forbes.com/sites/jjcolao/2012/12/14/snapchat-adds-video-now-seeing-50-million-photos-a-day/?sh=55425197631b>.

²⁷⁹ Ellis Hamburger, *Snapchat's Next Big Thing: 'Stories' That Don't Just Disappear*, Verge (Oct. 3, 2013), <https://www.theverge.com/2013/10/3/4791934/snapchats-next-big-thing-stories-that-dont-just-disappear>.

1 added a feature that enabled users to communicate with one another in real time via text or video.²⁸⁰
 2 It also added the “Our Story” feature, expanding on the original stories function by allowing users
 3 in the same location to add their photos and videos to a single publicly viewable content stream.²⁸¹
 4 At the same time, Snap gave users the capability to add filters and graphic stickers onto photos
 5 indicating a user’s location through a feature it refers to as “Geofilters.”²⁸²

6 235. In 2015, Snap added a “Discover” feature that promotes videos from news outlets
 7 and other content creators.²⁸³ Users can watch that content by scrolling through the Discover feed.
 8 After the selected video ends, Snapchat automatically plays other video content in a continuous
 9 stream unless or until a user manually exits the stream.

10 236. In 2020, Snap added the “Spotlight” feature, through which it serves users “an
 11 endless feed of user-generated content” Snap curates from the 249 million daily Snapchat users.²⁸⁴

12 **1. Snap Designs and Markets Its Platform to Appeal to a Youth** 13 **Audience**

14 237. Snap specifically markets Snapchat to children aged 13 to 17 because they are a
 15 key demographic for Snap’s advertisers. Advertising is Snap’s primary source of revenue and is
 16 essential to its business model.
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 18
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20 ²⁸⁰ Romain Dillet, *Snapchat Adds Ephemeral Text Chat and Video Calls*, TechCrunch (May 1,
 21 2014), <https://techcrunch.com/2014/05/01/snapchat-adds-text-chat-and-video-calls/>.

22 ²⁸¹ Laura Stampler, *Snapchat Just Unveiled a New Feature*, Time (June 17, 2014),
<https://time.com/2890073/snapchat-new-feature/>.

23 ²⁸² Angela Moscaritolo, *Snapchat Adds ‘Geofilters’ in LA, New York*, PC Mag. (July 15, 2014),
 24 <https://www.pcmag.com/news/snapchat-adds-geofilters-in-la-new-york>.

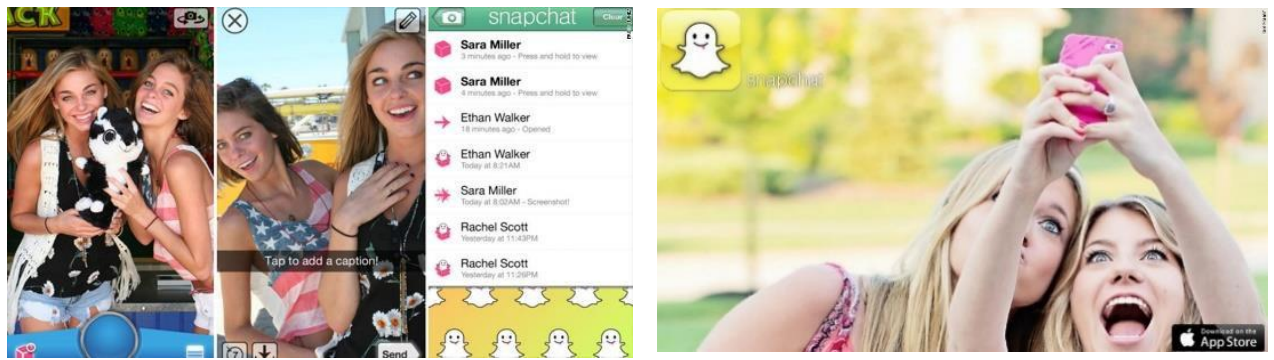
25 ²⁸³ Steven Tweedie, *How to Use Snapchat’s New ‘Discover’ Feature*, Bus. Insider (Jan. 27, 2015),
<https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1>.

26 ²⁸⁴ Salvador Rodriguez, *Snap is launching a competitor to TikTok and Instagram Reels*, CNBC
 27 (Nov. 23, 2020), <https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-reels.html>.
 28

238. Snap began running advertisements on Snapchat in 2014.²⁸⁵ Since then, Snapchat's business model has revolved around its advertising revenue, which has boomed. Snap now expects to generate \$4.86 billion in Snapchat advertising revenue for 2022.²⁸⁶

239. Internal documents describe users between the ages of 13 and 34 as "critical" to Snap's advertising success because of the common milestones achieved within that age range.²⁸⁷

240. While Snap lumps teenagers in with younger adults in its investor materials, Snap's marketing materials featuring young models reveal its priority market:



²⁸⁵ Sara Fischer, *A timeline of Snap's advertising, from launch to IPO*, Axios (Feb. 3, 2017), <https://www.axios.com/2017/12/15/a-timeline-of-snaps-advertising-from-launch-to-ipo-1513300279>.

²⁸⁶ Bhanvi Staija, *TikTok's ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters (Apr. 11, 2022), <https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/>.

²⁸⁷ *October 2022 Investor Presentation* at 27, Snap Inc. (Oct. 20, 2022), <https://investor.snap.com/events-and-presentations/presentations/default.aspx>.



241. In addition to its marketing, Snap has targeted a younger audience by designing Snapchat in a manner that older individuals find hard to use.²⁸⁸ The effect of this design is that Snapchat is a platform where its young users are insulated from older users, including their parents. As Snap's CEO explained, "[w]e've made it very hard for parents to embarrass their children."²⁸⁹

242. Snap also designed Snapchat as a haven for young users to hide content from their parents by ensuring that photos, videos, and chat messages quickly disappear. This design further insulates children from adult oversight.

²⁸⁸ See Hannah Kuchler & Tim Bradshaw, *Snapchat's Youth Appeal Puts Pressure on Facebook*, Fin. Times (Aug. 21, 2017), <https://www.ft.com/content/07e4dc9e-86c4-11e7-bf50-e1c239b45787>.

²⁸⁹ Max Chafkin & Sarah Frier, *How Snapchat Built a Business by Confusing Olds*, Bloomberg (Mar. 3, 2016), <https://www.bloomberg.com/features/2016-how-snapchat-built-a-business/>.

243. Moreover, Snap added as a feature the ability for users to create cartoon avatars modeled after themselves.²⁹⁰ By using an art form generally associated with and directed at younger audiences, Snap further designed Snapchat to entice teenagers and younger children.

244. In 2013, Snap also marketed Snapchat specifically to children under 13 through a feature it branded “SnapKidz.”²⁹¹ This feature – part of the Snapchat platform – allowed children under 13 to take photos, draw on them, and save them locally on the device.²⁹² Children could also send these images to others or upload them to other social media sites.²⁹³

245. While the SnapKidz feature was later discontinued, and Snap purports to now prohibit users under the age of 13, its executives have admitted that its age verification “is effectively useless in stopping underage users from signing up to the Snapchat app.”²⁹⁴

246. Snap’s efforts to attract young users have been successful. Teenagers consistently name Snapchat as a favorite social media platform. The latest figures show that 13% of children aged 8 to 12 used Snapchat in 2021,²⁹⁵ and almost 60% of children aged 13 to 17 use Snapchat.²⁹⁶

²⁹⁰ Kif Leswing, *Snapchat just introduced a feature it paid more than \$100 million for*, Bus. Insider (July 19, 2016), <https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-paid-more-than-100-million-for-2016-7>.

²⁹¹ Larry Magid, *Snapchat Creates SnapKidz – A Sandbox for Kids Under 13*, Forbes (June 23, 2013), <https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a>.

²⁹² *Id.*

²⁹³ *Id.*

²⁹⁴ Isobel Asher Hamilton, *Snapchat admits its age verification safeguards are effectively useless*, Bus. Insider (Mar. 19, 2019), <https://www.businessinsider.com/snapchat-says-its-age-verification-safeguards-are-effectively-useless-2019-3>.

²⁹⁵ Victoria Rideout et al., *The Common Sense Census: Media use by tweens and teens at 5*, Common Sense Media (2022), https://www.common Sense Media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

²⁹⁶ Emily A. Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

1 **2. Snap Intentionally Designs Exploitative Features to Keep**
 2 **Users on Its Platform for as Long as Possible**

3 247. Snap has implemented inherently and intentionally exploitative features into
 4 Snapchat that are designed to keep users on its platform for as long as possible. These features
 5 include “Snapstreaks,” various trophies and reward systems, quickly disappearing (“ephemeral”) messages, and filters. Snap designed these features, along with others, to maximize the amount of
 6 time users spend on Snapchat.

7 248. Snaps are intended to manipulate users by activating the rule of reciprocity.²⁹⁷
 8 Whenever a user gets a snap, they feel obligated to send a snap back. In addition, Snapchat tells
 9 users each time they receive a snap by pushing a notification to the recipient’s cellphone. These
 10 notifications are designed to prompt users to open Snapchat and view content, increasing the
 11 amount of time users spend on Snapchat. Further, because snaps disappear within ten seconds of
 12 being viewed, users feel compelled to reply immediately. This disappearing nature of snaps is a
 13 defining characteristic of Snapchat and is intended keep users on the platform.

14 249. Snap also keeps users coming back to the Snapchat platform through the
 15 “Snapstreaks” feature.²⁹⁸ A “streak” is a counter within Snapchat that tracks how many
 16 consecutive days two users have sent each other snaps. If a user fails to snap the other user within
 17 24 hours, the streak ends. Snap adds extra urgency by putting an hourglass emoji next to a friend’s
 18 name if a Snapchat streak is about to end.²⁹⁹ This design implements a system where a user must
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20
 21 ²⁹⁷ Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 14, 2015),
<https://www.nirandfar.com/psychology-of-snapchat/>.

22 ²⁹⁸ See Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure*
 23 *you in and get you ‘addicted’*, Bus. Insider (Feb. 17, 2018), <https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13>; see generally Virginia Smart & Tyana Grundig, *‘We’re designing minds’: Industry insider reveals secrets of addictive app trade*, CBC (Nov. 3, 2017),
 24 <https://www.cbc.ca/news/science/marketplace-phones-1.4384876>; Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017), <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.
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 27 ²⁹⁹ Lizette Chapman, *Inside the Mind of a Snapchat Streaker*, Bloomberg (Jan. 30, 2017),
<https://www.bloomberg.com/news/features/2017-01-30/inside-the-mind-of-a-snapchat-streaker>.
 28

1 ““check constantly or risk missing out.””³⁰⁰ This feature is particularly effective on teenage users.
 2 “For *teens in particular*, streaks are a vital part of using the app, and of their social lives as a
 3 whole.”³⁰¹ Some children become so obsessed with maintaining a Snapstreak that they give their
 4 friends access to their accounts when they may be away from their phone for a day or more, such
 5 as on vacation.³⁰²

6 250. Snap also designed features that operate on IVR principles to maximize the time
 7 users are on its platform. The “rewards” come in the form of a user’s “Snapscore” and other
 8 signals of recognition similar to “likes” used in other platforms. For example, a Snapscore
 9 increases with each snap a user sends and receives. The increase in score and other trophies and
 10 charms users can earn by using the app operate on variable reward patterns. Like Snapstreaks,
 11 these features are designed to incentivize sending snaps and increase the amount of time users
 12 spend on Snapchat.

13 251. Snap also designs photo and video filters and lenses, which are central to
 14 Snapchat’s function as a photo- and video-sharing social media platform. Snap designed its filters
 15 and lenses in a way to further maximize the amount of time users spend on Snapchat. One way
 16 Snap uses its filters to hook young users is by creating temporary filters that impose a sense of
 17 urgency to use them before they disappear. Another way Snap designed its filters to increase
 18
 19
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21 ³⁰⁰ *Id.*

22 ³⁰¹ Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you*
 23 *in and get you ‘addicted’*, Bus. Insider (Feb. 17, 2018), [https://www.businessinsider.com/how-](https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13)
 24 *app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-*
keep-you-hooked-13; see generally Cathy Becker, *Experts warn parents how Snapchat can hook*
in teens with streaks, ABC News (July 27, 2017), [https://abcnews.go.com/Lifestyle/experts-warn-](https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296)
parents-snapchat-hook-teens-streaks/story?id=48778296.

25 ³⁰² Caroline Knorr, *How to resist technology addiction*, CNN (Nov. 9, 2017),
 26 <https://www.cnn.com/2017/11/09/health/science-of-tech-obsession-partner/index.html>; Jon
 27 Brooks, *7 Specific Tactics Social Media Companies Use to Keep You Hooked*, KQED (June 9,
 28 2017), [https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-](https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked)
you-hooked.

1 screen use is by gamification. Many filters include games,³⁰³ creating competition between users
 2 by sending each other snaps with scores. Further, Snap tracks data on the most commonly used
 3 filters and develops new filters based on this data.³⁰⁴ Snap also personalizes filters to further entice
 4 individuals to use Snapchat more.³⁰⁵ Snap designs and modifies these filters to maximize the
 5 amount of time users spend on Snapchat.

6 252. Snap also uses complex algorithms to keep users engaged with Snapchat by
 7 suggesting friends to users and recommending new content.

8 253. Snap notifies users based on an equation Snap uses to determine whether someone
 9 should add another user as a friend on Snapchat. This is known as “Quick Add.” By using an
 10 algorithm to suggest friends to users, Snapchat increases the odds users will add additional friends,
 11 send additional snaps, and spend more time on the app.

12 254. Snapchat also contains “Discover” and “Spotlight” features that use algorithms to
 13 recommend content to users. The Discover feature includes content from news and other media
 14 outlets.³⁰⁶ A user’s Discover page is populated by an algorithm and constantly changes depending
 15 on how a user interacts with the content.³⁰⁷ Similarly, the Spotlight feature promotes popular
 16 videos from other Snapchat users and is based on an algorithm that determines whether a user has
 17 positively or negatively engaged with similar content.³⁰⁸ Snap programs its algorithms to push
 18

19 ³⁰³ Josh Constine, *Now Snapchat Has ‘Filter Games’*, TechCrunch (Dec. 23, 2016),
 20 <https://techcrunch.com/2016/12/23/snapchat-games/>.

21 ³⁰⁴ *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information>
 (last visited Feb. 27, 2023).

22 ³⁰⁵ *Id.*

23 ³⁰⁶ Steven Tweedie, *How to Use Snapchat’s New ‘Discover’ Feature*, Bus. Insider (Jan. 27, 2015),
 24 <https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1>.

25 ³⁰⁷ *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information>
 (last visited Feb. 27, 2023).

26 ³⁰⁸ Sara Fischer, *Snapchat launches Spotlight, a TikTok competitor*, Axios (Nov. 23, 2020),
 27 <https://www.axios.com/2020/11/23/snapchat-launches-spotlight-tiktok-competitor>; *How We Use*
 28 *Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information> (last visited Feb.
 27, 2023).

1 content to users that will keep them engaged on Snapchat and thereby increases the amount of time
 2 users spend on Snapchat, worsening their mental health.

3 **3. Snap’s Conduct in Designing and Operating Its Platform Has** 4 **Harmed Youth Mental Health**

5 255. The way in which Snap has designed and operated Snapchat has caused youth to
 6 suffer increased anxiety, depression, disordered eating, cyberbullying, and sleep deprivation.

7 256. Snap knows Snapchat is harming youth because, as alleged above, Snap
 8 intentionally designed Snapchat to maximize engagement by preying on the psychology of
 9 children through its use of algorithms and other features including Snapstreaks, various trophies
 10 and reward systems, quickly disappearing messages, filters, and games.

11 257. Snap should know that its conduct has negatively affected youth. Snap’s conduct
 12 has been the subject of inquiries by the United States Senate regarding Snapchat’s use “to promote
 13 bullying, worsen eating disorders and help teens buy dangerous drugs or engage in reckless
 14 behavior.”³⁰⁹ Further, Senators from across the ideological spectrum have introduced bills that
 15 would ban many of the features Snapchat uses, including badges and other awards recognizing a
 16 user’s level of engagement with the platform.³¹⁰ Despite these calls for oversight from Congress,
 17 Snap has failed to curtail its use of streaks, badges, and other awards that recognize users’ level of
 18 engagement with Snapchat.

19 258. Snap also knows or should know of Snapchat’s other negative effects on youth
 20 because of published research findings. For instance, the *Journal of the American Medical*
 21 *Association* has recognized that Snapchat’s effect on how young people view themselves is so

22
 23
 24 ³⁰⁹ Bobby Allyn, *4 Takeaways from the Senate child safety hearing with YouTube, Snapchat and*
 25 *TikTok*, Nat’l Pub. Radio (Oct. 26, 2021), <https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing>.

26 ³¹⁰ See Abigail Clukey, *Lawmaker Aims To Curb Social Media Addiction With New Bill*, Nat’l
 27 Pub. Radio (Aug. 3, 2019), <https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill>; *Social Media Addiction Reduction Technology Act*, S. 2314, 116th Cong. (2019); *Kids Internet Design and Safety Act*, S. 2918, 117th Cong. (2021).

1 severe that it named a new disorder, “Snapchat dysmorphia,” after the platform.³¹¹ This disorder
 2 describes people, usually young women, seeking plastic surgery to make themselves look the way
 3 they do through Snapchat filters.³¹² The rationale underlying this disorder is that beauty filters on
 4 social media, like Snapchat, create a “sense of unattainable perfection” that is alienating and
 5 damaging to a person’s self-esteem.³¹³ One social psychologist summed up the effect this way:
 6 “[T]he pressure to present a certain filtered image on social media can certainly play into
 7 [depression and anxiety] for younger people who are just developing their identities.”³¹⁴

8 259. Despite knowing Snapchat harms its young users, Snap continues to update and add
 9 features intentionally designed to maximize the amount of time users spend on Snapchat. Snap
 10 continues its harmful conduct because its advertising revenue relies on Snapchat’s users
 11 consuming large volumes of content on its platform.

12 **J. TikTok’s Social Media Platform Has Substantially Contributed to the** 13 **Youth Mental Health Crisis**

14 260. TikTok is a social media platform that describes itself as “the leading destination
 15 for short-form mobile video.”³¹⁵ According to TikTok, it is primarily a platform where users
 16 “create and watch short-form videos.”³¹⁶

19 ³¹¹ ‘Snapchat Dysmorphia’: When People Get Plastic Surgery To Look Like A Social Media
 20 Filter, WBUR (Aug 29, 2018), <https://www.wbur.org/hereandnow/2018/08/29/snapchat-dysmorphia-plastic-surgery>.

21 ³¹² *Id.*

22 ³¹³ Nathan Smith & Allie Yang, *What happens when lines blur between real and virtual beauty*
 23 *through filters*, ABC News (May 1, 2021), <https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989>.

24 ³¹⁴ *Id.*

25 ³¹⁵ *About: Our Mission*, TikTok, <https://www.tiktok.com/about> (last visited Feb. 27, 2023).

26 ³¹⁶ Testimony of Michael Beckerman, VP and Head of Public Policy, Americas, TikTok,
 27 *Protecting Kids Online: Snapchat, TikTok, and YouTube: Hearing Before the Subcomm. On*
 28 *Consumer Protection, Product Safety, and Data Security*, 117 Cong. (2021).

261. TikTok's predecessor, Musical.ly, launched in 2014 as a place where people could create and share 15-second videos of themselves lip-syncing or dancing to their favorite music.³¹⁷

262. In 2017, ByteDance launched an international version of a similar platform that also enabled users to create and share short lip-syncing videos that it called TikTok.³¹⁸

263. That same year, ByteDance acquired Musical.ly to leverage its young user base in the United States of almost 60 million monthly active users.³¹⁹

264. Months later, the apps were merged under the TikTok brand.³²⁰

265. Since then, TikTok has expanded the length of time for videos from 15 seconds to up to 10 minutes;³²¹ created a fund that was expected to grow to over \$1 billion within three years to incentivize users to create videos that even more people will watch;³²² and had users debut their own songs, share comedy skits,³²³ and "challenge" others to perform an activity.³²⁴

³¹⁷ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you've probably never heard of*, Bus. Insider (May, 28, 2016), <https://www.businessinsider.com/what-is-musically-2016-5>.

³¹⁸ Paresh Dave, *China's ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug. 1, 2018), <https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW>.

³¹⁹ Liza Lin & Rolfe Winkler, *Social-Media App Musical.ly Is Acquired for as Much as \$1 billion; With 60 million monthly users, startup sells to Chinese maker of news app Toutiao*, Wall St. J. (Nov. 10, 2017), <https://www.wsj.com/articles/lip-syncing-app-musical-ly-is-acquired-for-as-much-as-1-billion-1510278123>.

³²⁰ Paresh Dave, *China's ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug. 1, 2018), <https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW>.

³²¹ Andrew Hutchinson, *TikTok Confirms that 10 Minute Video Uploads are Coming to All Users*, SocialMediaToday (Feb. 28, 2022), <https://www.socialmediatoday.com/news/tiktok-confirms-that-10-minute-video-uploads-are-coming-to-all-users/619535/>.

³²² Vanessa Pappas, *Introducing the \$200M TikTok Creator Fund*, TikTok (July 29, 2021), <https://newsroom.tiktok.com/en-us/introducing-the-200-million-tiktok-creator-fund>.

³²³ Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and Teen Markets*, Inc. (June 2, 2016), <https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html>.

³²⁴ John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019), <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html>.

266. TikTok has designed its platform to facilitate bottomless scrolling with a never-ending stream of videos.

267. “[O]ne of the defining features of the TikTok platform” is its “For You” feed.³²⁵ This is a space within the platform where TikTok offers content supposedly curated for them based on complex, machine-learning algorithms intended to keep users on its platform. TikTok itself describes the feed as “central to the TikTok experience and where most of our users spend their time.”³²⁶ *The New York Times* described it this way:

It’s an algorithmic feed based on videos you’ve interacted with, or even just watched. It never runs out of material. It is not, unless you train it to be, full of people you know, or things you’ve explicitly told it you want to see. It’s full of things that you seem to have demonstrated you want to watch, no matter what you actually say you want to watch.³²⁷

268. The “For You” feed has successfully garnered TikTok hundreds of millions of users. Since 2018, TikTok has grown from 271 million global users to more than 1 billion global monthly users as of September 2021.³²⁸ As of July 2020, “TikTok classified more than a third of its 49 million daily users in the United States as being 14 years old or younger,” and that likely underestimates those under 14 and older teenagers (*i.e.*, those between 15 and 18 years old) because TikTok claims not to know how old a third of its daily users are.³²⁹

³²⁵ *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

³²⁶ *Id.*

³²⁷ John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019), <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html>.

³²⁸ Jessica Bursztynsky, *TikTok says 1 billion people use the app each month*, CNBC (Sept. 27, 2021), <https://www.cnn.com/2021/09/27/tiktok-reaches-1-billion-monthly-users.html>.

³²⁹ Raymond Zhong & Sheera Frenkel, *A Third of TikTok’s U.S. Users May Be 14 or Under, Raising Safety Questions*, N.Y. Times (Sept. 17, 2020), <https://www.nytimes.com/2020/08/14/technology/tiktok-underage-users-ftc.html>.

1 **1. TikTok Designs and Markets Its Platform to Appeal to a**
 2 **Youth Audience**

3 269. TikTok, like the other defendants’ platforms, has built its business plan around
 4 advertising revenue, which has boomed. In 2022, TikTok is projected to receive \$11 billion in
 5 advertising revenue, over half of which (*i.e.*, \$6 billion) is expected to come from the United
 6 States.³³⁰

7 270. TikTok, since its inception as Musical.ly, has been designed and developed with
 8 youth in mind.

9 271. Alex Zhu (“Zhu”) and Louis Yang (“Yang”), the co-founders of Musical.ly, raised
 10 \$250,000 to build an app that experts could use to create short three- to five-minute videos
 11 explaining a subject.³³¹ The day they released the app, Zhu said they knew “[i]t was doomed to
 12 be a failure” because “[i]t wasn’t entertaining, and it didn’t attract teens.”³³²

13 272. According to Zhu, he stumbled upon the idea that would become known as TikTok
 14 while observing teens on a train, half of whom were listening to music, while the other half took
 15 selfies or videos and shared the results with friends.³³³ “That’s when Zhu realized he could
 16 combine music, videos, and a social network to attract the early-teen demographic.”³³⁴

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21 ³³⁰ Bhanvi Staija, *TikTok’s ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters
 22 (Apr. 11, 2022), <https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/>.

23 ³³¹ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app*
 24 *you’ve probably never heard of*, Bus. Insider (May 28, 2016), <https://www.businessinsider.com/what-is-musically-2016-5>.

25 ³³² *Id.*

26 ³³³ *Id.*

27 ³³⁴ *Id.*

1 273. Zhu and Yang thereafter developed the short-form video app that is now known as
 2 TikTok, which commentators have observed “encourages a youthful audience in subtle and
 3 obvious ways.”³³⁵

4 274. Among the more subtle ways the app was marketed to youth are its design and
 5 content. For example, the Federal Trade Commission (“FTC”) alleged that the app: (a) initially
 6 centered around a child-oriented activity (*i.e.*, lip syncing); (b) featured music by celebrities that
 7 then appealed primarily to teens and tweens, such as Selena Gomez and Ariana Grande; (c) labeled
 8 folders with names meant to appeal to youth, such as “Disney” and “school”; and (d) included
 9 songs in such folders related to Disney television shows and movies, such as “Can You Feel the
 10 Love Tonight” from the movie “The Lion King” and “You’ve Got a Friend in Me” from the movie
 11 “Toy Story” and songs covering school-related subjects or school-themed television shows and
 12 movies.³³⁶

13 275. The target demographic was also reflected in the sign-up process. In 2016, the
 14 birthdate for those signing up for the app defaulted to the year 2000 (*i.e.*, 16 years old).³³⁷

15 276. TikTok also cultivated a younger demographic in unmistakable, albeit concealed,
 16 ways. In 2020, *The Intercept* reported on a document TikTok prepared for its moderators. In the
 17 document, TikTok instructs its moderators that videos of senior people with “too many wrinkles”
 18
 19
 20
 21

22 ³³⁵ John Herrman, *Who’s Too Young for an App? Musical.ly Tests the Limits*, N.Y. Times
 23 (Sept. 16, 2016), <https://www.nytimes.com/2016/09/17/business/media/a-social-network-frequented-by-children-tests-the-limits-of-online-regulation.html>.

24 ³³⁶ Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief, *United States*
 25 *v. Musical.ly*, No. 2:19-cv-01439-ODW-RAO, ECF 1 (“*Musical.ly* Complaint”) at 8, ¶¶26-27
 (C.D. Cal. Feb. 27, 2019).

26 ³³⁷ Melia Robinson, *How to use Musical.ly, the app with 150 million users that teens are obsessed*
 27 *with*, Bus. Insider (Dec. 7, 2016), <https://www.businessinsider.com/how-to-use-musically-app-2016-12>.
 28

1 are disqualified for the “For You” feed because that would make “the video . . . much less
2 attractive [and] not worth[] . . . recommend[ing.]”³³⁸

3 277. In December 2016, Zhu confirmed the company had actual knowledge that a lot of
4 their users are under 13, including some top users.³³⁹

5 278. The FTC alleged that despite the company’s knowledge of these and a “significant
6 percentage” of other users who were under 13, the company failed to comply with COPPA.³⁴⁰

7 279. TikTok settled those claims in 2019 by agreeing to pay what was then the largest-
8 ever civil penalty under COPPA and to several forms of injunctive relief.³⁴¹

9 280. In an attempt to come into compliance with the consent decree and COPPA, TikTok
10 made available to users under 13 what it describes as a “limited, separate app experience.”³⁴²
11 The child version of TikTok restricts users from posting videos through the app. Children can
12 still, however, record and watch videos on TikTok.³⁴³ For that reason, experts fear the app is
13 “designed to fuel [children’s] interest in the grown-up version.”³⁴⁴

14 281. These subtle and obvious ways TikTok markets to and obtained a young user base
15 are manifestations of Zhu’s views about the importance of user engagement to growing TikTok.

16
17 ³³⁸ Sam Biddle et al., *Invisible Censorship: TikTok Told Moderators to Suppress Posts by “Ugly”*
18 *People and the Poor to Attract New Users*, The Intercept (Mar. 15, 2020),
<https://theintercept.com/2020/03/16/tiktok-app-moderators-users-discrimination/>.

19 ³³⁹ Jon Russell, *Muscal.ly defends its handling of young users, as it races past 40M MAUs* at 8:58-
20 11:12, TechCrunch (Dec. 6, 2016), <https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/>.

21 ³⁴⁰ See generally Musical.ly Complaint, ¶19.

22 ³⁴¹ Lesley Fair, *Largest FTC COPPA settlement requires Musical.ly to change its tune*, FTC (Feb.
23 27, 2019), <https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune>.

24 ³⁴² Dami Lee, *TikTok stops young users from uploading videos after FTC settlement*, Verge
25 (Feb. 27, 2019), <https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law>.

26 ³⁴³ *Id.*

27 ³⁴⁴ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. for Fam. Stud. (Mar. 29, 2022),
<https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->.

1 Zhu explained the target demographic to *The New York Times*: “[T]eenage culture doesn’t exist”
 2 in China because ““teens are super busy in school studying for tests, so they don’t have the time
 3 and luxury to play social media apps.””³⁴⁵ By contrast, Zhu describes “[t]eenagers in the U.S. [as]
 4 a golden audience.””³⁴⁶

5 282. TikTok’s efforts to attract young users have been successful. Over 67% of children
 6 aged 13 to 17 report having used the TikTok app.³⁴⁷

7 **2. TikTok Intentionally Designs Features to Keep Users on Its** 8 **Platform for as Long as Possible**

9 283. Like the other defendants’ social media platforms, TikTok developed features that
 10 exploit psychological phenomenon such as IVRs and reciprocity to maximize the time users spend
 11 on its platform.

12 284. TikTok employs design elements and complex algorithms to simulate variable
 13 reward patterns in a flow-inducing stream of short-form videos intended to captivate its users’
 14 attention well after they are satiated.

15 285. TikTok drives habitual use of its platform using design elements that operate on
 16 principles of IVRs. For example, TikTok designed its platform to allow users to like and reshare
 17 videos. Those features serve as rewards for users who create content on the platform. Receiving
 18 a like or reshare indicates that others approve of that user’s content and satisfies their natural desire
 19 for acceptance.³⁴⁸ Studies have shown that “likes” activate the reward region of the brain.³⁴⁹ The

20 ³⁴⁵ Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y.
 21 Times (Aug. 9, 2016), <https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html>.

22 ³⁴⁶ *Id.*

23 ³⁴⁷ Emily A. Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
 24 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

25 ³⁴⁸ See, e.g., Lauren E. Sherman et al., *The Power of the Like in Adolescence: Effects of Peer*
 26 *Influence on Neural and Behavioral Responses to Social Media*, 27(7) Psych. Sci. 1027-35
 (July 2016), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/>.

27 ³⁴⁹ *Id.*

1 release of dopamine in response to likes creates a positive feedback loop.³⁵⁰ Users will use TikTok
2 again and again in the hope of another pleasurable experience.³⁵¹

3 286. TikTok also uses reciprocity to manipulate users to use the platform. TikTok
4 invokes reciprocity through features like “Duet.” The Duet feature allows users to post a video
5 side by side with a video from another TikTok user. Users use Duet as a way to react to the videos
6 of TikTok content creators. The response is intended to engender a reciprocal response from the
7 creator of the original video.

8 287. TikTok, like Snapchat, offers video filters, lenses, and music, which are intended
9 to keep users on its platform. Also, like Snapchat, TikTok has gamified its platform through
10 “challenges.” These challenges are essentially campaigns in which users compete to perform a
11 specific task. By fostering competition, TikTok incentivizes users to use its platform.

12 288. TikTok’s defining feature, its “For You” feed, is a curated, never-ending stream of
13 short-form videos intended to keep users on its platform. In that way, TikTok feeds users beyond
14 the point they are satiated. The ability to scroll *ad infinitum*, coupled with the variable reward
15 pattern of TikTok, induces a flow-like state for users that distorts their sense of time.³⁵² That flow
16 is yet another way TikTok increases the time users spend on its platform.

17 289. Like other defendants, TikTok employs algorithms to keep users engaged. For
18 instance, the first thing users see when they open TikTok is the “For You” feed even if they have
19 never posted anything, followed anyone, or liked a video.³⁵³

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21 ³⁵⁰ Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the*
22 *Development of Social Media Addiction*, 11(7) J. Neurology & Neurophysiology 507 (2020),
<https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf>.

23 ³⁵¹ *Id.*

24 ³⁵² Christian Montag et al., *Addictive Features of Social Media/Messenger Platforms and*
25 *Freemium Games against the Background of Psychological and Economic Theories*, 16(14) Int’l
J. Env’t Rsch. & Pub. Health 2612 (July 23, 2019), <https://doi.org/10.3390/ijerph16142612>.

26 ³⁵³ Brian Feldman, *TikTok is Not the Internet’s Eden*, N.Y. Mag. (Mar. 16, 2020),
27 <https://nymag.com/intelligencer/2020/03/tiktok-didnt-want-you-to-see-ugly-or-poor-people-on-its-app.html>.

290. The “For You” page presents users with a “stream of videos” TikTok claims are “curated to [each user’s] interests.”³⁵⁴

291. According to TikTok, it populates each user’s “For You” feed by “ranking videos based on a combination of factors” that include, among others, any interests expressed when a user registers a new account, videos a user likes, accounts they follow, hashtags, captions, sounds in a video they watch, and certain device settings such as their language preferences and where they are located.³⁵⁵

292. Critically, some factors weigh heavier than others. To illustrate, TikTok explains that an indicator of interest, such as “whether a user finishes watching a longer video from beginning to end, would receive greater weight than a weak indicator, such as whether the video’s viewer and creator are both in the same country.”³⁵⁶

293. TikTok claims it ranks videos in this way because the length of time a user spends watching a video is a “strong indicator of interest.”³⁵⁷

294. However, Zhu offered a different explanation. He repeatedly told interviewers that he was “focused primarily on increasing the engagement of existing users.”³⁵⁸ ““Even if you have tens of millions of users,”” Zhu explained, ““you have to keep them *always* engaged.””³⁵⁹

295. The decisions TikTok made in programming its algorithms are intended to do just that, as TikTok candidly explained in an internal document titled, “TikTok Algo 101.” The

³⁵⁴ *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

³⁵⁵ *Id.*

³⁵⁶ *Id.*

³⁵⁷ *Id.*

³⁵⁸ Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and Teen Markets*, Inc. (June 2, 2016), <https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html>.

³⁵⁹ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve probably never heard of*, Bus. Insider (May 28, 2016), <https://www.businessinsider.com/what-is-musically-2016-5> (emphasis added).

document, which TikTok has confirmed is authentic, “explains frankly that in the pursuit of the company’s ‘ultimate goal’ of adding daily active users, it has chosen to optimize for two closely related metrics in the stream of videos it serves: ‘retention’ – that is, whether a user comes back – and ‘time spent.’”³⁶⁰

296. “‘This system means that watch time is key.’”³⁶¹ Chaslot, the founder of Algo Transparency, who reviewed the document at the request of *The New York Times*, explained: “[R]ather than giving [people] what they really want,” TikTok’s “algorithm tries to get people addicted.”³⁶²

297. Put another way, the algorithm, coupled with the design elements, conditions users through reward-based learning processes to facilitate the formation of habit loops that encourage excessive use.

298. The end result is that TikTok uses “a machine-learning system that analyzes each video and tracks user behavior so it can serve up a continually refined, never-ending stream of TikToks optimized to hold [users’] attention.”³⁶³

3. TikTok’s Conduct in Designing and Operating Its Platform Has Harmed Youth Mental Health

299. TikTok’s decision to program its algorithms to prioritize user engagement causes harmful and exploitative content to be amplified to the young market it has cultivated.

300. TikTok’s prioritization of user engagement amplifies the spread of misinformation and content that promotes hate speech and self-harm. The Integrity Institute, a nonprofit organization of engineers, product managers, data scientists, and others, has demonstrated how

³⁶⁰ Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021), <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>.

³⁶¹ *Id.*

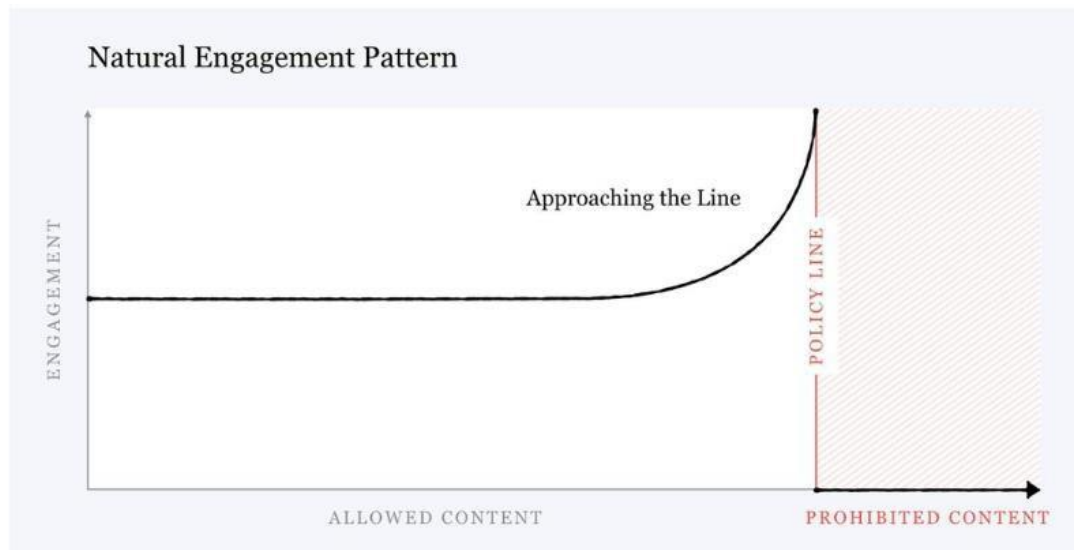
³⁶² *Id.*

³⁶³ Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019), <https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention>.

1 prioritizing user engagement amplifies misinformation on TikTok and other platforms.³⁶⁴ That
 2 pattern, the Integrity Institute notes, is “true for a broad range of harms,” including hate speech
 3 and self-harm content, in addition to misinformation.³⁶⁵

4 301. The Integrity Institute’s analysis builds on a premise Mark Zuckerberg
 5 (“Zuckerberg”), CEO of Facebook, described as the “Natural Engagement Pattern.”³⁶⁶

6 302. The chart below shows that as content gets closer and closer to becoming harmful,
 7 on average, it gets more engagement:



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364 *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022), <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>; see also Steven Lee Myers, *How Social Media Amplifies Misinformation More Than Information*, N.Y. Times (Oct. 13, 2022), <https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-institute-report.html>.

365 *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022), <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>.

366 Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement*, Facebook (May 5, 2021), <https://www.facebook.com/notes/751449002072082/>.

367 *Id.*

1 303. According to Zuckerberg: “[N]o matter where we draw the lines for what is
2 allowed, as a piece of content gets close to that line, people will engage with it more on average.”³⁶⁸

3 304. This has important implications for any social media platform design, as the
4 Integrity Institute explains:

5 [W]hen platforms use machine learning models to predict user engagement on
6 content, we should expect the predicted engagement to follow the actual
7 engagement. When those predictions are used to rank and recommend content,
8 specifically when a higher predicted engagement score means the content is more
9 likely to be recommended or placed at the top of feeds, then we expect that
10 misinformation will be preferentially distributed and amplified on the platform.³⁶⁹

11 305. Put differently, if you use past engagement to predict future engagement, as TikTok
12 does, you are most likely to populate users “For You” feed with harmful content.

13 306. The Integrity Institute tested its theory by analyzing the spread of misinformation
14 on TikTok. Specifically, the Integrity Institute compared the amount of engagement (*e.g.*, number
15 of views) received by a post containing misinformation as compared to prior posts from the same
16 content creator.³⁷⁰

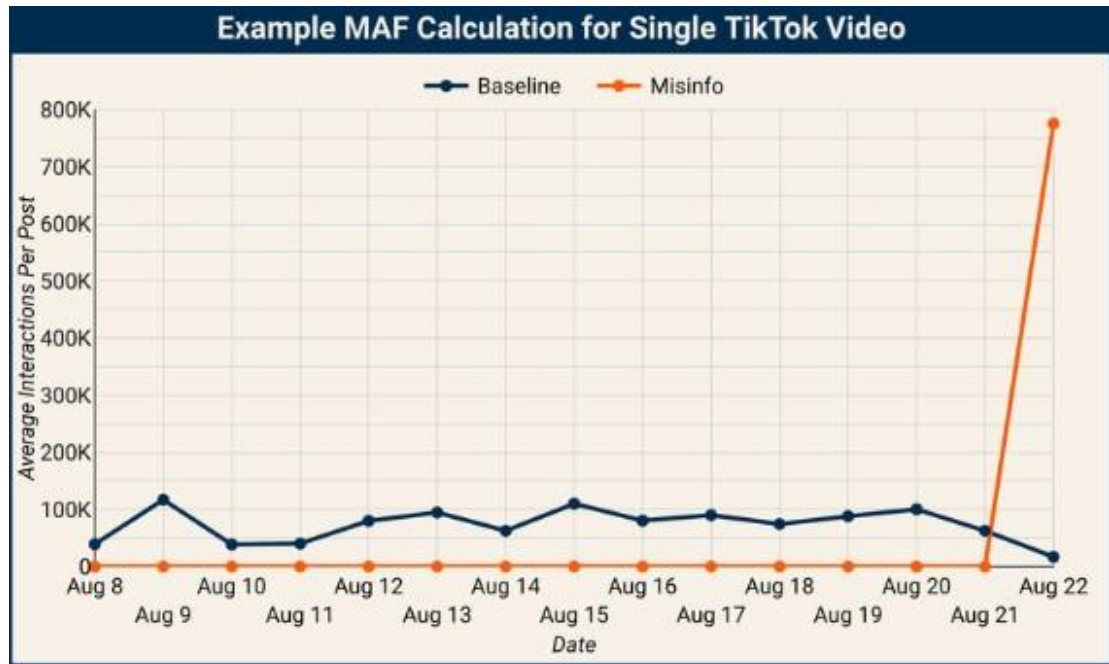
17 307. For example, a TikTok user’s historical posts received on average 75,000 views.
18 When that same user posted a false statement (as determined by the International Fact Checking
19 Network), the post received 775,000 views. In this case, TikTok amplified the misinformation ten
20 times more than this user’s typical content.³⁷¹

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22
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24 ³⁶⁸ *Id.*

25 ³⁶⁹ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13,
26 2022), <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>.

27 ³⁷⁰ *Id.*

28 ³⁷¹ *Id.*



308. After analyzing many other posts from other users, the Integrity Institute found that TikTok on average amplified misinformation 29 times more than other content.³⁷²

309. A separate investigation by *NewsGuard* found TikTok's search algorithm similarly amplified misinformation. TikTok's search engine, like its "For You" feed, is a favorite among youth, with 40% preferring it (and Instagram) over Google.³⁷³ Unfortunately, *NewsGuard* found that one in five of the top 20 TikTok search results on prominent news topics, such as school shootings and COVID-19 vaccines, contain misinformation.³⁷⁴

310. Misinformation is just one type of harmful content TikTok amplifies to its young users. Investigations by *The Wall Street Journal* found TikTok inundated young users with videos about depression, self-harm, drugs, and extreme diets, to name a few.

³⁷² *Id.*

³⁷³ Wanda Pogue, *Move Over Google. TikTok Is the Go-To Search Engine for Gen Z*, *Adweek* (Aug. 4, 2022), <https://www.adweek.com/social-marketing/move-over-google-tiktok-is-the-go-to-search-engine-for-gen-z/>.

³⁷⁴ *Misinformation Monitor*, *NewsGuard* (Sept. 2022), <https://www.newsguardtech.com/misinformation-monitor/september-2022/>.

1 311. In one investigation, *The Wall Street Journal* found TikTok’s algorithm quickly
 2 pushed users down rabbit holes where they were more likely to encounter harmful content. *The*
 3 *Wall Street Journal* investigated how TikTok’s algorithm chose what content to promote to users
 4 by having 100 bots scroll through the “For You” feed.³⁷⁵ Each bot was programmed with interests,
 5 such as extreme sports, forestry, dance, astrology, and animals.³⁷⁶ Those interests were not
 6 disclosed in the process of registering their accounts.³⁷⁷ Rather, the bots revealed their interests
 7 through their behaviors, specifically the time they spent watching the videos TikTok recommended
 8 to them. Consistent with TikTok’s internal “Algo 101” document, *The Wall Street Journal* found
 9 time spent watching videos was “the most impactful data on [what] TikTok serves you.”³⁷⁸

10 312. Over the course of 36 minutes, one bot watched 224 videos, lingering over videos
 11 with hashtags for “depression” or “sad.”³⁷⁹ From then on, 93% of the videos TikTok showed this
 12 account were about depression or sadness.³⁸⁰

13 313. That is not an outlier. Former YouTube engineer Guillaume Chaslot who worked
 14 on the algorithm for YouTube, explained that 90% to 95% of the content users see on TikTok is
 15 based on its algorithm.³⁸¹

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21 ³⁷⁵ *Inside TikTok’s Algorithm: A WSJ Video Investigation*, Wall St. J. (July 21, 2021),
<https://www.wsj.com/articles/tiktok-algorithm-video-investigation-11626877477>.

22 ³⁷⁶ *Id.*

23 ³⁷⁷ *Id.*

24 ³⁷⁸ *Id.*

25 ³⁷⁹ *Id.*

26 ³⁸⁰ *Id.*

27 ³⁸¹ *Id.*

1 314. “[E]ven bots with general mainstream interests got pushed to the margin as the
 2 recommendations got more personalized and narrow.”³⁸² Deep in these rabbit holes, *The Wall*
 3 *Street Journal* found “users are more likely to encounter potential harmful content.”³⁸³

4 315. Chaslot explained why TikTok feeds users this content:

5 [T]he algorithm is able to find the piece of content that you’re vulnerable to. That
 6 will make you click, that will make you watch, but it doesn’t mean you really like
 7 it. And that it’s the content that you enjoy the most. It’s just the content that’s most
 likely to make you stay on the platform.³⁸⁴

8 316. A follow-up investigation by *The Wall Street Journal* using bots found “that
 9 through its powerful algorithms, TikTok can quickly drive minors – among the biggest users of
 10 the app – into endless spools of content about sex and drugs.”³⁸⁵

11 317. The bots in this investigation were registered as users aged 13 to 15 and, as before,
 12 programmed to demonstrate interest by how long they watched the videos TikTok’s algorithms
 13 served them.³⁸⁶ The bots scrolled through videos that did not match their interests without
 14 pausing.³⁸⁷ The bots lingered on videos that matched any of their programmed interests.³⁸⁸

15 318. Every second the bot hesitated or rewatched a video again proved key to what
 16 TikTok recommended to the accounts, which *The Wall Street Journal* found was used to “drive
 17 users of any age deep into rabbit holes of content.”³⁸⁹

18
 19 ³⁸² *Id.*

20 ³⁸³ *Id.*

21 ³⁸⁴ *Id.*

22 ³⁸⁵ Rob Barry et al., *How TikTok Serves Up Sex and Drug Videos to Minors*, Wall St. J. (Sept. 8,
 23 2021), https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare_permalink.

24 ³⁸⁶ *Id.*

25 ³⁸⁷ *Id.*

26 ³⁸⁸ *Id.*

27 ³⁸⁹ *Id.*

319. For example, one bot was programmed to pause on videos referencing drugs, among other topics. The first day on the platform, the “account lingered on a video of a young woman walking through the woods with a caption suggesting she was in search of marijuana.”³⁹⁰ The following day, the bot viewed a video of a “marijuana-themed cake.”³⁹¹ The “majority of the next thousand videos” TikTok directed at the teenage account “tout[ed] drugs and drug use, including marijuana, psychedelics and prescription medication.”³⁹²

320. TikTok similarly zeroed in on and narrowed the videos it showed accounts whether the bot was programmed to express interest in drugs, sexual imagery, or a multitude of interests. In the first couple of days, TikTok showed the bots a “high proportion of popular videos.”³⁹³ “But after three days, TikTok began serving a high number of obscure videos.”³⁹⁴

321. For example, a bot registered as a 13 year old was shown a series of popular videos upon signing up.³⁹⁵ The bot, which was programmed to demonstrate interest in sexual text and imagery, also watched sexualized videos.

322. At least 2,800 of the sexualized videos that were shown to *The Wall Street Journal*’s bots were labeled as being for adults only.³⁹⁶ However, TikTok directed these videos to the minor accounts because, as TikTok told *The Wall Street Journal*, it does not “differentiate between videos it serves to adults and minors.”³⁹⁷

³⁹⁰ *Id.*

³⁹¹ *Id.*

³⁹² *Id.*

³⁹³ *Id.*

³⁹⁴ *Id.*

³⁹⁵ *Id.*

³⁹⁶ *Id.*

³⁹⁷ *Id.*

1 323. TikTok also directed a concentrated stream of videos at accounts programmed to
 2 express interest in a variety of topics. One such account was programmed to linger over hundreds
 3 of Japanese film and television cartoons. “In one streak of 150 videos, all but four” of the videos
 4 TikTok directed at the account “featured Japanese animation – many with sexual themes.”³⁹⁸

5 324. The relentless stream of content intended to keep users engaged “can be especially
 6 problematic for young people” because they may lack the capability to stop watching, says David
 7 Anderson, a clinical psychologist at the nonprofit mental health care provider, The Child Mind
 8 Institute.³⁹⁹

9 325. In a similar investigation, *The Wall Street Journal* found TikTok “flood[ed] teen
 10 users with videos of rapid-weight-loss competitions and ways to purge food that health
 11 professionals say contribute to a wave of eating-disorder cases spreading across the country.”⁴⁰⁰

12 326. In this investigation, *The Wall Street Journal* analyzed the tens of thousands of
 13 videos TikTok recommended to a dozen bots registered as 13 year olds. As before, the bots were
 14 given interests. Bots scrolled quickly through videos that did not match their interests and lingered
 15 on videos that did.⁴⁰¹ The accounts registered as 13 year olds were programmed at different times
 16 to display interests in weight loss, gambling, and alcohol.⁴⁰²

17 327. “TikTok’s algorithm quickly g[ave] users the content they’ll watch, for as long as
 18 they’ll watch it.”⁴⁰³ For example, TikTok streamed gambling videos to a bot registered to a 13
 19
 20

21 ³⁹⁸ *Id.*

22 ³⁹⁹ *Id.*

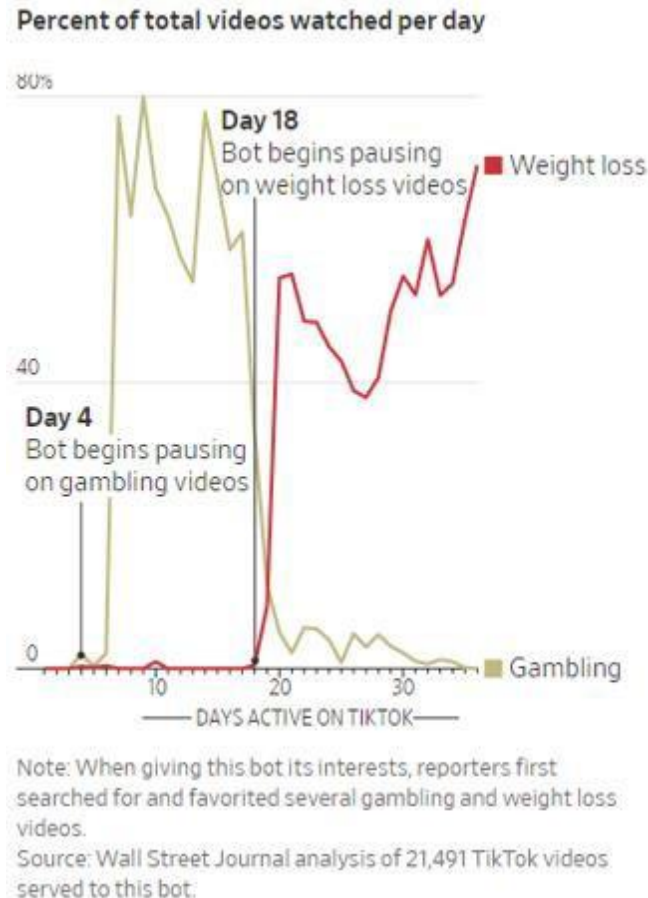
23 ⁴⁰⁰ Tawnell D. Hobbs et al., *The Corpse Bride Diet: How TikTok Inundates Teens with Eating-*
Disorder Videos, Wall St. J. (Dec. 17, 2021), [https://www.wsj.com/articles/how-tiktok-inundates-](https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848)
 24 [teens-with-eating-disorder-videos- 11639754848](https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848) (some of the accounts performed searches or
 sent other, undisclosed signals indicating their preferences).

25 ⁴⁰¹ *Id.*

26 ⁴⁰² *Id.*

27 ⁴⁰³ *Id.*

year old after it first searched for and favorited several such videos.⁴⁰⁴ When the bot began demonstrating interest in weight loss videos, the algorithm adapted quickly, as the chart below demonstrates:⁴⁰⁵



328. After the change in programming, weight loss videos accounted for well over 40% of the content TikTok's algorithm recommended to the user.⁴⁰⁶

329. The other accounts were also flooded with weight loss videos. Over the course of about 45 days, TikTok inundated the accounts with more than 32,000 such videos, "many promoting fasting, offering tips for quickly burning belly fat and pushing weight-loss detox

⁴⁰⁴ *Id.*

⁴⁰⁵ *Id.*

⁴⁰⁶ *Id.*

1 programs and participation in extreme weight-loss competitions.”⁴⁰⁷ Some encouraged purging,
 2 eating less than 300 calories a day, consuming nothing but water some days, and other hazardous
 3 diets.⁴⁰⁸

4 330. According to Alyssa Moukheiber, a treatment center dietitian, TikTok’s powerful
 5 algorithm and the harmful streams of content it directs at young users can tip them into unhealthy
 6 behaviors or trigger a relapse.⁴⁰⁹

7 331. Unfortunately, it has done just that for several teenage girls interviewed by *The*
 8 *Wall Street Journal*, who reported developing eating disorders or relapsing after being influenced
 9 by the extreme diet videos TikTok promoted to them.⁴¹⁰

10 332. They are not alone. Katie Bell, a co-founder of the Healthy Teen Project, “said the
 11 majority of her 17 teenage residential patients told her TikTok played a role in their eating
 12 disorders.”⁴¹¹

13 333. Others, like Stephanie Zerwas, an associate professor of psychiatry at the
 14 University of North Carolina at Chapel Hill, could not recount how many of her young patients
 15 told her that: “‘I’ve started falling down this rabbit hole, or I got really into this or that influencer
 16 on TikTok, and then it started to feel like eating-disorder behavior was normal, that everybody was
 17 doing that.’”⁴¹²

18 334. This trend extends nationwide. The National Association of Anorexia Nervosa and
 19 Associated Disorders has fielded 50% more calls to its hotline since the pandemic began, most of
 20 whom it says are from young people or parents on their behalf.⁴¹³

21 ⁴⁰⁷ *Id.*

22 ⁴⁰⁸ *Id.*

23 ⁴⁰⁹ *Id.*

24 ⁴¹⁰ *Id.*

25 ⁴¹¹ *Id.*

26 ⁴¹² *Id.*

27 ⁴¹³ *Id.*

335. Despite the ample evidence that TikTok’s design and operation of its platform harms the tens of millions of youths who use it, TikTok continues to manipulate them into returning to the platform again and again so that it may serve them ads in between the exploitative content it amplifies.

V. THE COMMUNICATIONS DECENCY ACT EXPRESSLY ALLOWS INTERACTIVE COMPUTER SERVICE COMPANIES TO LIMIT HARMFUL CONTENT AND PROVIDES NO BLANKET IMMUNITY FOR THE ALLEGED MISCONDUCT HERE

336. The Communications Decency Act, 47 U.S.C. §230(c), was passed by Congress to address the harms associated with certain content and drafted to limit liability for “Good Samaritans” seeking to restrict such harmful content. It is entitled “*Protection for ‘Good Samaritan’ blocking and screening of offensive material*” and states in 230(c)(1) that: “[n]o provider or user of an interactive computer service *shall be treated as the publisher* or speaker of any information provided by another information content provider.” 47 U.S.C. §230(c) (emphasis added); *see* 47 U.S.C. §230(b)(4)-(5). Section 230(c)(2), entitled “Civil liability,” expressly states that providers or users may not be held liable for actions taken “*to restrict access* to or availability of material” or to provide others with the means to “restrict access” to material “that the provider or user considers to be *obscene, lewd, lascivious, filthy, excessively violent, harassing, or otherwise objectionable*, whether or not such material is constitutionally protected.” 47 U.S.C. §230(c)(2)(A). Thus, the Communications Decency Act protects “Good Samaritans” seeking to limit the deluge of harmful content; it is no shield for defendants’ own deliberate acts in designing, marketing, and operating social media platforms in ways harmful to youth so as to maximize youth engagement and advertising dollars.

337. Plaintiff expressly disavows any claims or allegations that attempt to hold defendants liable as the publisher or speaker of any information provided by third parties within the plain meaning of the statute and as interpreted by applicable law.

338. The Communications Decency Act does not immunize defendants’ conduct from liability because, among other considerations: (a) defendants are liable for their own affirmative conduct in recommending, promoting, and amplifying harmful content to youth in ways

1 deliberately designed to be addictive; (b) defendants are liable for their own actions designing and
 2 marketing their social media platforms in a way that causes harm; (c) defendants are liable for the
 3 content they create that causes harm; and (d) defendants are liable for deliberately creating
 4 experiences for youth they know or have reason to know is harmful, unlawful, and/or tortious.

5 339. Plaintiff's claims arise from defendants' status as designers and marketers of
 6 dangerous social media platforms that have injured the health, comfort, and repose of its youth
 7 community. The nature of defendants' platforms centers around defendants' use of algorithms
 8 and other design features that encourage users to spend the maximum amount of time on their
 9 platforms.

10 340. Defendants are also liable for the content they create. In addition to content such
 11 as, for example, Snapchat filters, which promote body dysmorphia, defendants send emails and
 12 notifications to youth including material they create, which often promotes and amplifies harmful
 13 content.

14 341. Plaintiff's claims are predicated on defendants' conduct which has resulted in
 15 fueling the current youth mental health crisis so evident among plaintiff's youth.

16 **VI. CAUSES OF ACTION**

17 **COUNT I**

18 **Violations of Florida Public Nuisance Law (Against All Defendants)**

19 342. Plaintiff incorporates each preceding paragraph as though set forth fully herein.

20 343. Plaintiff brings this claim under Florida public nuisance law as to all defendants.

21 344. Florida courts have long recognized that anything that interferes with public health
 22 and promotes the spread of disease, bodily injury, and/or death may be considered a public
 23 nuisance and that a use or interference with real property is not required. A public nuisance is one
 24 that interferes with public health and welfare, and creates an imminent risk of public harm.

25 345. Defendants have created a mental health crisis in plaintiff's public schools, injuring
 26 the public health and safety in plaintiff's community and interfering with the operations, use, and
 27

1 enjoyment of the property of plaintiff's public schools. This condition affected any considerable
2 and substantial number of persons in plaintiff's jurisdiction.

3 346. Employees and patrons, including students, of plaintiff's public schools have a right
4 to be free from conduct that endangers their health and safety. However, defendants have engaged
5 in conduct that endangers or injures the health and safety of the employees and students of
6 plaintiff's public schools by designing, marketing, and operating their respective social media
7 platforms for use by students in plaintiff's public schools in a manner that substantially interferes
8 with the functions and operations of plaintiff's public schools and impacts the public health, safety,
9 and welfare of the plaintiff's public schools.

10 347. Each defendants has created or assisted in the creation of a condition that is
11 injurious to the health and safety of plaintiff and its students and employees and interferes with the
12 comfortable enjoyment of life and property of the plaintiff's public schools.

13 348. The health and safety of the students and employees of plaintiff's public schools,
14 including those who use, have used, or will use defendants' platforms, as well as those affected by
15 others' use of their platforms, are matters of substantial public interest and of legitimate concern
16 to plaintiff.

17 349. Defendants' nuisance-creating conduct was intentional and unreasonable and/or
18 violated statutes which established specific legal requirements for the protection of others.
19 Defendants' conduct has affected and continues to affect a substantial number of people within
20 plaintiff's public schools and is likely to continue causing significant harm.

21 350. Defendants had control over their conduct in plaintiff's public schools and that
22 conduct had an adverse effect on the public right. Defendants had sufficient control over, and
23 responsibility for, the public nuisance they created. Defendants were in control of the
24 "instrumentality" of the nuisance, namely the operation of their social media platforms, at all
25 relevant times.

26 351. Defendants' ongoing conduct has directly caused a severe disruption of the public
27 health, order, and safety in plaintiff's public schools. Defendants' conduct is ongoing and
28 continues to produce permanent and long-lasting damage.

1 352. Defendants' conduct has created an ongoing, significant, unlawful, and
2 unreasonable interference with rights common to the general public, including the public health,
3 welfare, safety, peace, comfort, and convenience of plaintiff's public schools.⁴¹⁴

4 353. This harm to youth mental health and the corresponding impacts to the public
5 health, safety, and welfare of plaintiff's public schools outweighs any social utility of defendants'
6 wrongful conduct.

7 354. The rights, interests, and inconvenience to plaintiff's public schools far outweigh
8 the rights, interests, and inconvenience to defendants, who have profited tremendously from their
9 wrongful conduct.

10 355. But for defendants' actions, plaintiff's students would not use social media
11 platforms as frequently or as long as they do today, would not be deluged with exploitative and
12 harmful content to the same degree, and the public health crisis that currently exists as a result of
13 defendants' conduct would have been averted.

14 356. Logic, common sense, justice, policy, and precedent indicate defendants' unfair and
15 deceptive conduct has caused the damage and harm complained of herein. Defendants knew, or
16 reasonably should have known, that their design, promotion, and operation of their platforms
17 would cause students to use their platforms excessively, that their marketing was designed to
18 appeal to youth, and that their active efforts to increase youth use of their platforms were causing
19 harm to youth and to schools, including youth in plaintiff's public schools.

20 357. Thus, the public nuisance caused by defendants was reasonably foreseeable,
21 including the financial and economic losses incurred by plaintiff's public schools. Defendants
22 know, and have known, that their intentional, unreasonable, negligent, and unlawful conduct will
23 cause, and has caused, youth to become addicted to their social media platforms, which has a
24 harmful effect on youth mental health.

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28 ⁴¹⁴ See Restatement (Second) of Torts §821B.

1 358. Despite this knowledge, defendants intentionally, negligently, unreasonably, and/or
2 unlawfully marketed their products to adolescents and children, fueling the youth mental health
3 crisis in plaintiff's public schools.

4 359. Alternatively, defendants' conduct was a substantial factor in bringing about the
5 public nuisance even if a similar result would have occurred without it. By designing, marketing,
6 promoting, and operating their platforms in a manner intended to maximize the time youth spend
7 on their respective platforms, despite knowledge of the harms to youth from their wrongful
8 conduct, defendants directly facilitated the widespread, excessive, and habitual use of their
9 platforms and the public nuisance affecting plaintiff's public schools. By seeking to capitalize on
10 their success by refining their platforms to increase the time youth spend on their platforms,
11 defendants directly contributed to the public health crisis and the public nuisance affecting
12 plaintiff's public schools.

13 360. Defendants' conduct is of a continuing nature and/or has produced a permanent or
14 long-lasting effect, and, as defendants' know or have reason to know, have a significant effect
15 upon the public right.

16 361. Defendants' intentional, negligent, and/or unreasonable nuisance-creating conduct,
17 for which the gravity of the harm outweighs the utility of the conduct, includes:

18 (a) Designing, marketing, promoting, and/or operating their platforms in a
19 manner intended to prioritize harmful content and maximize the time youth spend on their
20 respective platforms, despite knowledge of the harms to youth from their wrongful conduct;

21 (b) Manipulating users to keep using or coming back to their platforms through
22 the use of IVRs;

23 (c) Intentionally marketing their platforms to youths and adolescents, directly
24 facilitating the widespread, excessive, and habitual use of their platforms among youth; and

25 (d) Knowingly designing and modifying their platforms in ways that promote
26 excessive and problematic use in ways known to be harmful to children.

27 362. Defendants owed the public legal duties, including a preexisting duty not to expose
28 plaintiff's public schools to an unreasonable risk of harm and a duty to exercise reasonable and

1 ordinary care and skill in accordance with the applicable standards of conduct in designing and
2 marketing a product to youth and adolescents.

3 363. Each defendants breached its duty to exercise the appropriate degree of care
4 commensurate with marketing and promoting their products to youth.

5 364. Defendants' conduct is especially injurious to plaintiff's public schools because, as
6 a direct and proximate cause of defendants' conduct creating or assisting in the creation of a public
7 nuisance, plaintiff and its students and employees have sustained and will continue to sustain
8 substantial injuries.

9 365. Each defendants is liable for creating the public nuisance because the intentional,
10 unreasonable, negligent, and/or unlawful conduct of each defendants was a substantial factor in
11 producing the public nuisance and harm to plaintiff.

12 366. The nuisance created by defendants' conduct is abatable.

13 367. plaintiff has incurred expenditures and has had to take steps to mitigate the harm
14 and disruption caused by defendants' conduct, including the following:

15 (a) hiring additional personnel to address mental, emotional, and social health
16 issues;

17 (b) developing additional resources to address mental, emotional, and social
18 health issues;

19 (c) increasing training for teachers and staff to identify students exhibiting
20 symptoms affecting their mental, emotional, and social health;

21 (d) training teachers, staff, and members of the community about the harms
22 caused by defendants' wrongful conduct;

23 (e) developing lesson plans to teach students about the dangers of using
24 defendants' platforms;

25 (f) educating students about the dangers of using defendants' platforms;

26 (g) addressing property damaged as a result of students acting out because of
27 mental, social, and emotional problems defendants' conduct is causing;

28

1 (h) increasing disciplinary services and time spent addressing bullying,
2 harassment, and threats;

3 (i) confiscating devices on which students use defendants' platforms while in
4 class or on plaintiff's public school campuses;

5 (j) meeting with students and the parents of students caught using defendants'
6 platforms at school or addressing other disciplinary matters related to students' use of defendants'
7 platforms;

8 (k) diverting time and resources from instructional activities to notify parents
9 and guardians of students' behavioral issues and attendance;

10 (l) investigating and responding to threats made against plaintiff's public
11 schools and students over social media;

12 (m) updating its student handbook to address use of defendants' platforms; and

13 (n) updating school policies to address use of defendants' platforms.

14 368. Fully abating the nuisance resulting from defendants' conduct will require much
15 more than these steps.

16 369. Plaintiff's public schools request an order providing for abatement of the public
17 nuisance that defendants have created, or of which defendants have assisted in the creation, and
18 enjoining defendants from future violations.

19 370. Plaintiff also seeks the maximum statutory and civil penalties permitted by law,
20 including actual and compensatory damages, as a result of the public nuisance that defendants have
21 created, or of which defendants have assisted in the creation.

22 371. Defendants are jointly and severally liable because they have acted in concert with
23 each other and because plaintiff is not at fault.

24 **COUNT II**

25 **Violation of Florida's Deceptive and Unfair** 26 **Trade Practices Act (§501.201, *et. seq.*)** **(Against All Defendants)**

27 372. Plaintiff incorporates each preceding paragraph as though set forth fully herein.

1 373. Plaintiff brings this claim under the Florida Deceptive and Unfair Trade Practices
2 Act (“FDUTPA”) as to all defendants.

3 374. FDUTPA prohibits “[u]nfair methods of competition, unconscionable acts or
4 practices, and unfair or deceptive acts or practices in the conduct of any trade or commerce”
5 Fla. Stat. Ann. §501.204(1). In construing the provisions of FDUTPA, “due consideration and
6 great weight shall be given to the interpretations of the Federal Trade Commission and the federal
7 courts relating to s§5(a)(1) of the Federal Trade Commission Act, 15 U.S.C. §45(a)(1) as of July
8 1, 2017.”⁴¹⁵

9 375. Plaintiff is an “[i]nterested party or person” within the meaning of Fla. Stat.
10 §501.203(6) and a “person” as envisioned in Fla. Stat. §501.211.

11 376. Defendants engage in “[t]rade or commerce” as defined by the FDUTPA. *See* Fla.
12 Stat. Ann. §501.203(8).

13 377. “A deceptive act may be found when there is a ‘representation, omission, or practice
14 that is likely to mislead the consumer acting reasonably in the circumstances, to the consumer’s
15 detriment.’” *PNR, Inc. v. Beacon Prop. Mgmt., Inc.*, 842 So.2d 773, 777 (Fla. 2003).

16 378. An “unfair practice is one that offends established public policy and one that is
17 immoral, unethical, oppressive, unscrupulous or substantially injurious to consumers.”⁴¹⁶

18 379. Defendants’ engaged in unfair and deceptive acts and practices that violated
19 FDUTPA by:

20 (a) Designing, marketing, promoting, and/or operating their platforms in a
21 manner intended to prioritize harmful content and maximize the time youth spend on their
22 respective platforms, despite knowledge of the harms to youth from their wrongful conduct;

23 (b) Manipulating users to keep using or coming back to their platforms through
24 the use of IVRs;

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26
27 ⁴¹⁵ *Id.*

28 ⁴¹⁶ *Id.*

1 (c) Intentionally marketing their platforms to youths and adolescents, directly
2 facilitating the widespread, excessive, and habitual use of their platforms among youth; and

3 (d) Knowingly designing and modifying their platforms in ways that promote
4 excessive and problematic use in ways known to be harmful to children.

5 380. By seeking to capitalize on their success by refining their platforms to prioritize
6 harmful content and manipulate youth to spend excessive time on their platforms, defendants have
7 engaged in deceptive practices that were likely to and did mislead youth acting reasonably in the
8 circumstances, to their detriment.

9 381. Defendants' immoral, unethical, oppressive, and unscrupulous practices described
10 above resulted in substantial injuries to youth, and the current public health crisis affecting youth
11 mental health.

12 382. As a direct and proximate result of defendants' FDUTPA violations, plaintiff has
13 suffered harm and is threatened with continuing harm.

14 383. Plaintiff has incurred damages and has had to take steps to mitigate the harm and
15 disruption caused by defendants' conduct, including the following:

16 (a) hiring additional personnel to address mental, emotional, and social health
17 issues;

18 (b) developing additional resources to address mental, emotional, and social
19 health issues;

20 (c) increasing training for teachers and staff to identify students exhibiting
21 symptoms affecting their mental, emotional, and social health;

22 (d) training teachers, staff, and members of the community about the harms
23 caused by defendants' wrongful conduct;

24 (e) developing lesson plans to teach students about the dangers of using
25 defendants' platforms;

26 (f) educating students about the dangers of using defendants' platforms;

27 (g) addressing property damaged as a result of students acting out because of
28 mental, social, and emotional problems defendants' conduct is causing;

1 (h) increasing disciplinary services and time spent addressing bullying,
2 harassment, and threats;

3 (i) confiscating devices on which students use defendants' platforms while in
4 class or on plaintiff's public school campuses;

5 (j) meeting with students and the parents of students caught using defendants'
6 platforms at school or addressing other disciplinary matters related to students' use of defendants'
7 platforms;

8 (k) diverting time and resources from instructional activities to notify parents
9 and guardians of students' behavioral issues and attendance;

10 (l) investigating and responding to threats made against plaintiff's public
11 schools and students over social media;

12 (m) updating its student handbook to address use of defendants' platforms; and

13 (n) updating school policies to address use of defendants' platforms.

14 384. FDUTPA's safe harbor provision §501.212(2) does not apply to defendants. First,
15 plaintiff is not alleging defendants are liable for what others have said on defendants' platforms
16 but rather for defendants' own conduct. Second, plaintiff's claims arise from defendants' status
17 as designers and marketers of dangerous social media platforms that have injured the health,
18 comfort, and repose of its community. The nature of defendants' platforms centers around
19 defendants' use of algorithms and other design features that maximize harmful content and
20 encourage users to spend the maximum amount of time on their platforms – not on particular third-
21 party content. Third, defendants are liable for the content they create. Fourth, defendants
22 knowingly violated FDUTPA by intentionally designing and operating platforms targeted at youth,
23 that amplify harmful content and addictive utilization. And fifth, plaintiff does not seek to hold
24 defendants liable as publishers or speakers of information provided by other content providers;
25 instead, plaintiff seeks to hold defendants liable for distributing material they know or should know
26 is harmful or unlawful.

27 385. The above described conduct has been willful within the meaning of Fla. Stat. Ann.
28 §501.2075 and is unlawful under the FDUTPA.

COUNT III
Negligence
(Against All Defendants)

386. Plaintiff incorporates each preceding paragraph as though set forth fully herein.

387. Defendants owed the public legal duties, including a preexisting duty not to expose plaintiff's public schools to an unreasonable risk of harm and a duty to exercise reasonable and ordinary care and skill in accordance with the applicable standards of conduct in designing and marketing a product to youth and adolescents.

388. At all relevant times to this litigation, defendants had a duty to exercise reasonable care in the design, marketing, promoting, and operating of their platforms, including the duty to take all reasonable steps necessary to design, market, promote, and operate their platforms in a way that was not unreasonably dangerous to youth.

389. At all times relevant to this litigation, defendants knew or should have known of the dangers of defendants' platforms and specifically, that their prioritization and creation of harmful content, and facilitation of widespread, excessive, and habitual use of their platforms by youth, resulted in and continues to result in significant harm to plaintiff. As such, defendants have breached their duty of care owed to plaintiff. Defendants have breached and continue to breach to their duty of care owed to plaintiff through their actions, business decisions, and policies in the development, setup, management, maintenance, operation, marketing, advertising, promotion, supervision, and control of their respective platforms.

390. Defendants' negligence includes:

(a) Designing, marketing, promoting, and/or operating their platforms in a manner intended to prioritize and create harmful content and maximize the time youth spend on their respective platforms, despite knowledge of the harms to youth from their wrongful conduct;

(b) Manipulating users to keep using or coming back to their platforms through the use of IVRs;

(c) Intentionally marketing their platforms to youths and adolescents, directly facilitating the widespread, excessive, and habitual use of their platforms among youth; and

1 (d) Knowingly designing and modifying their platforms in ways that promote
2 excessive and problematic use in ways known to be harmful to children.

3 391. Defendants knew and/or should have known that it was foreseeable that plaintiff
4 would suffer injuries as a result of defendants' failure to exercise ordinary care in the designing,
5 marketing, promoting, and/or operating of their platforms, particularly when defendants targeted
6 youth in plaintiff's schools.

7 392. As a direct and proximate cause of defendants' unreasonable and negligent conduct,
8 plaintiff has suffered and will continue to suffer harm.

9 **COUNT IV**
10 **Gross Negligence**
11 **(Against All Defendants)**

12 393. Plaintiff incorporates each preceding paragraph as though set forth fully herein.

13 394. Defendants owed the public legal duties, including a preexisting duty not to expose
14 plaintiff's public schools to an unreasonable risk of harm, and a duty to exercise reasonable and
15 ordinary care and skill in accordance with the applicable standards of conduct in design, marketing,
16 promoting, and operating their platforms.

17 395. At all relevant times to this litigation, defendants had a duty to exercise reasonable
18 care in the design, marketing, promoting, and operating of their platforms, including the duty to
19 take all reasonable steps necessary to design, market, promote, and operate their platforms in a
20 way that was not unreasonably dangerous to youth.

21 396. At all times relevant to this litigation, defendants knew or should have known of
22 the dangers of defendants' platforms and specifically, that their prioritization and creation of
23 harmful content, and facilitation of widespread, excessive, and habitual use of their platforms by
24 youth, resulted in and continues to result in significant harm to plaintiff. As such, defendants have
25 breached their duty of care owed to plaintiff.

26 397. Defendants have breached and continue to breach to their duty of care owed to
27 plaintiff through their actions, business decisions, and policies in the development, setup,
28

1 management, maintenance, operation, marketing, advertising, promotion, supervision, and control
2 of their respective platforms.

3 398. Defendants conduct was so reckless or wanting in care that it constitutes a
4 conscious disregard or indifference to the life, safety, or rights of persons exposed to such conduct,
5 including youth in plaintiff's schools, in that they acted with reckless indifference to the results,
6 or to the rights or safety of others because defendants knew, or a reasonable person or company in
7 defendants' position should have known, that defendants' conduct created an unreasonable risk of
8 harm, and the risk was so great that it was highly probable that harm would result. Defendants'
9 gross negligence caused plaintiff to suffer harm.

10 399. The gross negligence of defendants includes, but is not limited to, the following:

11 (a) Designing, marketing, promoting, and/or operating their platforms in a
12 manner intended to prioritize and create harmful content and maximize the time youth spend on
13 their respective platforms, despite knowledge of the harms to youth from their wrongful conduct;

14 (b) Manipulating users to keep using or coming back to their platforms through
15 the use of IVRs;

16 (c) Intentionally marketing their platforms to youths and adolescents, directly
17 facilitating the widespread, excessive, and habitual use of their platforms among youth; and

18 (d) Knowingly designing and modifying their platforms in ways that promote
19 excessive and problematic use in ways known to be harmful to children.

20 400. Defendants knew and/or should have known that it was foreseeable that plaintiff
21 would suffer injuries as a result of defendants' failure to exercise ordinary care in the designing,
22 marketing, promoting, and/or operating of their platforms, particularly when defendants targeted
23 youth in plaintiff's schools.

24 401. As a direct and proximate cause of defendants' grossly negligent conduct, plaintiff
25 has suffered and will continue to suffer harm.

26 402. Defendants' willful, knowing, and reckless conduct therefore warrants an award of
27 aggravated or punitive damages.

28

PRAYER FOR RELIEF

WHEREFORE, plaintiff prays for judgment as follows:

- A. Entering an order that the conduct alleged herein constitutes a public nuisance under Florida law;
- B. Entering an order that defendants' conduct is in violation of the FDUTPA;
- C. Entering an order that defendants are jointly and severally liable;
- D. Entering an order requiring defendants to abate the public nuisance described herein and to deter and/or prevent the resumption of such nuisance;
- E. Enjoining defendants and any agents, successors, assigns, and employees acting directly or through any corporate or business device from engaging in further actions causing or contributing to the public nuisance as described herein;
- F. Enjoining defendants and any agents, successors, assigns, and employees acting directly or through any corporate or business device from engaging in acts and practices alleged in this Complaint and any other acts and practices which violate the FDUTPA;
- G. Enjoining defendants from further violations of the COPPA and directing that defendants take affirmative steps to obtain "verifiable parental consent" prior to collecting and using information about them;
- H. Awarding equitable relief to fund prevention education and treatment for excessive and problematic use of social media;
- I. Awarding actual and compensatory damages;
- J. Awarding statutory damages in the maximum amount permitted by law;
- K. Awarding punitive damages;
- L. Awarding reasonable attorneys' fees and costs of suit;
- M. Awarding pre-judgment and post-judgment interest; and
- N. Such other and further relief as the Court deems just and proper under the circumstances.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a trial by jury.

DATED: March 23, 2023

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CERTIFICATE OF SERVICE

I hereby certify under penalty of perjury that on March 23, 2023, I authorized the electronic filing of the foregoing with the Clerk of the Court using the CM/ECF system which will send notification of such filing to the email addresses on the attached Electronic Mail Notice List, and I hereby certify that I caused the mailing of the foregoing via the United States Postal Service to the non-CM/ECF participants indicated on the attached Manual Notice List.

s/ Aelish M. Baig
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